Combined Index to

AGRICULTURAL ENGINEERING

The Journal of the

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS

Volume 51 — January to December 1970

TRANSACTIONS of the ASAE

Volume 13 - Nos. 1 through 6

ASAE CONFERENCE PROCEEDINGS

AGRICULTURAL ENGINEERING

		40	-	•	•	-		-		•	-	-	•	-		-			•		41	а.	-	-	•		٠,	٠,	٠,	tion.
Issue																														Pages
January																					e					0	٠			1-52
Februar	У														0															53-112
March								. ,																						113-168
April													,	,			×		,											169-260
May																														261-332
June																														333-392
July															0				0											393-436
August																	ń.													437-496
Septem	be	r					. ,											0												497-544
October									. ,															,,						545-616
Novemb	er																		*	×										617-676
Decemb	er																													677-728

TRANSACTIONS of the ASAE

Issue																Pages
No. 1 (JanFeb.)													 			1-152
No. 2 (MarApr.)													 			153-280
No. 3 (May-June)												۰				281-408
No. 4 (July-Aug.)													 			409-537
No. 5 (SeptOct.)					0	0			0	0						538-698
No. 6 (NovDec.)													 	 		699-900

ASAE CONFERENCE PROCEEDINGS

Issue	refix	Pages
The Undergraduate Education Seminar (PROC-169)	UE	1-134
Forest Engineering Conference on Education (PROC-170)	FE	1-80

(Page numbers with prefix "T" refer to the TRANSACTIONS of the ASAE — for other prefixes see "ASAE Conference Proceedings")

Published by the

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS ST. JOSEPH, MICHIGAN 49085

ALPHABETIC LISTING OF AUTHORS

		mm
A	Ben-Ur, Yoram	Effects of thermal exposure on the foliage of young corn and soybean
Abrams, C. F. Jr.	Velocity divergence of hot gases as affected by water-vapor releaseT 107	plantsT 5
Field tests of an active-seat suspen-	Bernard, Harold	Bucks, D. A.
sion for off-road vehicles T 608	Impact of agricultural pollutants on	A model study of drain envelopes in
Ackley, W. B.	water users 474	a coarse-silt base material T 66
The control and effects of supplemen-	Berning, W. H.	Buras, Nathan
tal carbon dioxide in air-supported plastic greenhouses	Air-steam treatment of horticultural	Field comparison of land smoothersT 63
Aldrich, R. A.	soil mixes in greenhouse benches T 691	Burkhalter, Harvey D.
Air-steam treatment of horticultural	Berry, I. L.	Direct seeding and the third forest 69
soil mixes in greenhouse benches T 691	Effects of 100F and 115F blackbody	A look at forest engineering in private
Alfaro, J. F.	radiation on flight activity of stable	forestryFE
Model theory for predicting process of	flies T 328	Burman, R. D.
leaching	Bickoff, E. M.	The inference of intake and hydraulic
Amberg, A. A.	Alfalfa products by wet fractionation .T 198	roughness parameters from plot run-
High-speed photography as a tool for	Bilanski, Walter K.	off using kinematic wave theory T 4
spray-droplet analysis T 541	Behavior under high pressure of wheat	Burnett, W. E.
Anderson, Earl D.	grains in bulkT 298	Control of odors from animal wastes.T 22
The fund-raising campaign 236	Black, R. D.	Burt, Eddie C.
Arkin, Gerald F.	The inference of intake and hydraulic	Design of a spinning disc, droplet sep-
Surface film coefficients for linearly	roughness parameters from plot run-	arator and the determination of the
converging ducts T 421	off using kinematic wave theory T 479	size and density of droplets deposited
Arthur, Robert M.	Black, Terence C. Plane nonisothermal air jets discharg-	on cotton foliageT 66
What is biological engineering? 691	ing along a smooth ceiling 774	Busch, Charles D. Pushbutton control for water systems
Attoe, O. J.	Blaisdell, John L.	management All
Effect of method of manure handling	Location of slowest cooling zone and	management 40 Bushmeyer, Richard W.
on crop yields, nutrient recovery and	rate of cooling of homogenized milk	Developing a roll wafering machine:
runoff lossesT 726	in various containersT 433	a progress report
_	Bond, J. J.	Bussell, W. H.
В	Rotating-boom plot irrigator with off-	Future trends in forest engineering FE 6
Bagnall, L. O.	set mountingT 143	Butler, B. J.
Drying the alfalfa stemT 232	Bond, Theodore E.	High-speed photography as a tool for
Bailey, William A.	Data acquisition in environmental re-	spray-droplet analysis T 54
CO ₂ systems for growing plants T 263	search 137	Butler, James L.
Bainer, Roy	Influence of space on performance of	Effect of partially field curing on en-
Projections - Agricultural mechaniza-	feedlot cattleT 145	ergy requirements for processing and
tion during next 50 years 244	Use of activity cameras in livestock	pelleting coastal bermudagrass 33
Baker, Donald	studies T 317	Butt, J. L.
Prepared discussion of papers on for-	Bondurant, J. A.	ASAE: that agricultural engineers may
estry training for engineers in manu-	An inexpensive countertimer for water	communicate 22
facturingFE 34 Bakker-Arkema, F. W.	velocity meters 600	
Bakker-Arkema, F. W.	Boose, J. R.	С
Use of digital computer for efficient	Thermal properties of frozen sucrose	Campbell, Joseph K.
drying of high-moisture, cereal-grain	solutions T 335	The patent system - source of infor-
doughT 61	Borchelt, Martin C.	mation for the engineer 35
A generalized theory of sorption phe-	Power weight transfer systems for	Cargill, Burton F.
nomena in biological materials - part	towed implements 28	Weight-volume relationships of tart and
I. the isotherm equation T 612	Bouchillon, C. W.	sweet cherries 7 48
Bal, Satish	Designing poultry house ventilation	Carleton, Walter M.
An analytical and experimental study	systems	Engineering research concepts for the
of radiant heating of rice grainT 644	mathematical modeling of thermal no-	year 2000 20
Bard, F. E.	meostasis in a chicken T 648	That "hidden" migration: history now! 59
Method of predicting thermal proper-	Bowen, Henry D. Projections – Research trends during	Carlson, S. D.
ties of frozen sucrose-corn syrup solids solutionsT 554	next 50 years 248	Electrophysiologically investigating the
Barfield, Billy J.	Physical factors affecting oxygen	optic tract of the tobacco hornworm
Predicting effects of CO ₂ enrichment	stress of germinating cotton seeds T 162	mothT 21
with simulation models and a digital	Stress of germinating cotton seeds 1 102	Carpenter, T. G.
computer T 246	Developing technical competence re-	Discussion of "similitude studies of
Barker, H. B.	garding engineering aspects of field	soil machine systems" 7 21
Purposes of CEANARUE 4	machineryUE 87 Electrostatic field breakdown phenom-	Carpenter, Walter F.
Barnes, Kenneth K.	ena in applying charged particles T 455	Centralized potato storage - a consult-
Projections - Trends in agricultural	Bowers, Wendell	ing engineer's approach
engineering curricula 230	Application of mathematical formulas	Carreker, John R.
Detachment characteristics of desert-	to repair cost dataT 806	Effect of water-table levels on evapo-
grown oranges and grapefruitT 528 Prepared discussion of papers on for-	Boyd, Conor W.	transpiration and crop yieldT 16
Prepared discussion of papers on for-	Prepared discussion of papers on for-	Chancellor, William J.
estry and engineering core position FE 13	estry and engineering core position FE 15	Relation of moisture content to failure
Barr, G. R.	Boyd, L. L.	strengths of seven agricultural soilsT
Effects of housing and protein levels	Anticipated opportunities and limita-	Stress-strain characteristics of a satu-
on winter growing and finishing of	tions for agricultural engineering edu-	rated clay soil at various rates of strain. T 68
swine T 520	cationUE 15	Chang, Hang-sun
Barre, H. J.	Braud, Harry J. Jr.	Mechanical properties of papaya and their dependence on maturityT 36
Analysis and hybrid simulation of	Foam protects strawberries during	Charity Lean E
deep-bed drying of grain T 752 Barrington, Gordon P.	freeze 80	Charity, Leon F. An experimental solid state differen-
Effect of mechanical forage-harvest-	Sprinkling to reduce heat stressing of	tial thermostat
ing devices on field-curing rates and	strawberry plants 140	An electrochemical function generator
relative harvesting losses T 874	Physical properties of foam for pro- tecting plants against cold weather T	for low frequencies 32
Bashford, Leonard L.	tecting plants against cold weather T 1 Brazee, Ross D.	Chen, A. C.
Instrumentation and temperature con-	Tillage-tool interaction with a bound-	Thermal conductivity of dry milk in a
trol of guarded hot-plate system for	ed, artificial soilT 409	packed bedT 39
measuring thermal properties of seed	Theoretical considerations of water-	Chen, Pictiaw
cottonT 155	shed surface descriptionT 462	Mechanical means of harvesting ber-
Batcheider, David G.	Cross-sectional area measurement of	ries 79
Thermal defoliator developments T 782	alfalfa stemsT 577	riesT 79 Chen, Y. R.
Baxter, D. O.	Bressler, Glenn O.	Computer methods in silencer design. T 59
Temperature preferences of chicks T 788	Drying poultry manure inside the poul-	Chesness, Jerry L.
Beakley, George C. Jr.	try house	Foam protects strawberries during
A crisis for agricultural engineering 638	Bromley, W. S.	freeze 8
Beasley, Robert P.	APA forest engineering viewpointFE 44	Sprinkling to reduce heat stressing of
Movement of agricultural fertilizers and organic insecticides in surface	Brooker, Donald B,	strawberry plants 14
runoff T 222	The future of farm animal waste man-	Physical properties of foam for pro-
runoff	agement 414 Brown, W. H.	tecting plants against cold weather T
A mathematical model of heat trans-	Brown, W. H.	An analytical and experimental study
fer in a pig T 450	Respiratory fraction of total insensible	of radiant heatingT 64
Beer, Craig E.	heat loss from shorn and unshorn	Cho, S. H.
Use of soil to treat anaerobic lagoon	sheepT 505	Approximate solution for rate of sub-
effluent: design and operation of a	Bruhn, H. D.	limation-dehydration of foodsT 55
field disposal system T 562		Chou, Yu-Tang
	Altering physical characteristics of al-	
Bellinger, Page L.	faira to increase the drying rate 1 82/	Discussion of "Stress-strain charac-
Curriculum requirements for agricul-	Effect of mechanical forage-harvesting	torictice of a caturated clay coil at
Curriculum requirements for agricul- ture's man-machine interfaceUE 60	Effect of mechanical forage-harvesting devices on field-curing rates and rela-	teristics of a saturated clay soil at various rates of strain"
Curriculum requirements for agricul- ture's man-machine interfaceUE 60 Projections – Product safety in 2020 279	Effect of mechanical forage-harvesting devices on field-curing rates and relative harvesting losses	teristics of a saturated clay soil at various rates of strain"
Curriculum requirements for agricul- ture's man-machine interfaceUE 60 Projections – Product safety in 2020 279 Benci, F. J.	Tarra to increase the drying rate 1 82/ Effect of mechanical forage-harvesting devices on field-curing rates and rela- tive harvesting losses	teristics of a saturated clay soil at various rates of strain"
Curriculum requirements for agricul- ture's man-machine interface UE 60 Projections – Product safety in 2020 279 Benci, F. J. Design of a spinning disc, droplet sep-	Effect of mechanical forage-harvesting devices on field-curing rates and relative harvesting losses	teristics of a saturated clay soil at various rates of strain" T 65 Chung, Do Sup Internal damage of wheat analyzed by radiographical examination T 25
Curriculum requirements for agricul- ture's man-machine interface UE 60 Projections — Product safety in 2020 279 Benci, F. J. Design of a spinning disc, droplet sep- arator and the determination of the	Faira to increase the drying rate 1 82/ Effect of mechanical forage-harvesting devices on field-curing rates and rela- tive harvesting losses T 874 Buchele, Wesley F. Beefmaker II: developing a total corn harvester 632	teristics of a saturated clay soil at various rates of strain" T 69 Chung, Do Sup Internal damage of wheat analyzed by radiographical examination T 29 Clark, Rex L.
Curriculum requirements for agricul- ture's man-machine interface UE 60 Projections – Product safety in 2020 279 Benci, F. J. Design of a spinning disc, droplet sep-	Effect of mechanical forage-harvesting devices on field-curing rates and relative harvesting losses	teristics of a saturated clay soil at various rates of strain" T 65 Chung, Do Sup Internal damage of wheat analyzed by radiographical examination T 25

		Discussion A AA	Final bank Bank F
Clark, Stanley J.		Dhanak, A. M.	Fischbach, Paul E.
Fluidic control of hydrostatic tractor transmissions	72	Thermal conductivity of dry milk in a packed bed	Electric controls for automatic sur- face irrigation systems with reuse
Clark, W. D.	16	Diener, R. G.	systemT 286
Data acquisition in environmental re-		Using an x-ray image scan to sort	Fisher, H. D.
search	137	bruised apples	An inexpensive countertimer for wa-
Clary, B. L.		Firmness and pitter loss studies of tart	ter velocity meters 600
Determining convective heat transfer	200	cherriesT 810	Flood, C. A. Jr.
coefficients from ellipsoidal shapes T	309	Dobie, John B. Storing wafered hay 22	Heat transfer in nucleate boiling of sorghum syrupT 594
Clayton, J. T. An inherent bond between concrete		Dondero, N. C.	Fluck, Richard C.
and plastics	562	Control of odors from animal wastes T 221	Detachment of tomato fruit from vines
Anticipated opportunities and limita-		Doss, Basil D.	as influenced by fruit maturity and
tions for agricultural engineering edu-		Evapotranspiration and drainage from	plant desiccationT 704
cationU	E 11	the root zone of irrigated coastal ber-	Foil, R. Rodney
Coan, R. M.		mudagrass (Cynodon Dactylon L. Pers.)	Formal brief: forest industry needs
Effects of thermal energy treatments	700	on coastal plains soils	both engineers and forestersFE 72
on the alfalfa weevilT	/99	Predicting effects of co2 enrichment	Fok, Yu-Si A study of two-dimensional infiltra-
Coble, C. G. Physical factors affecting oxygen		with simulation models and a digital	tion T 676
stress of germinating cotton seeds T	162	computerT 246	tion
Cochran, B. J.	200	Duran, Alvaro	Tillage-tool interaction with a bound-
Effects of soil temperature on emer-		Anaerobic decomposition of swine ex-	ed, artificial soilT 409
gence and development of cotton T	511	crement T 320	Foster, R. E. II
Coffelt, Robert J.	***	Dylla, A. S.	Mechanisms, culture, and varieties
Countercurrent grape sugar extraction. T	419	Hydraulic conductivity sampling for confidence	for selective mechanical cantaloupe harvest
Converse, Harry H. Internal damage of wheat analyzed by		confidence 405	Fox, William R.
radiographical examinationT	295	E	Forest engineering student needsFE 57
Cooper, Arthur W.	230		Formal brief: academic programs for
Effects of articulated steering on trac-		Earp, Unus F.	forest engineeringFE 71
tive performance of a rubber-tired log-		Electrophysiologically investigating the optic tract of the tobacco hornworm	Kinetic friction of cotton seeds as af-
ging tractorT Cooper, Geoffrey F.	633	mothT 214	fected by several factorsT 708 Franzoy, Carl E. Predicting irrigations from climatic
Cooper, Geoffrey F.	004	Eaton, F. E.	Franzoy, Carl E.
Laboratory testing of rice combines T Corcoran, Paul T.	824	Mechanical separation of stones from	Predicting irrigations from climatic
Determining dielectric properties of		potatoes with rotary brushesT 591	data and soil parametersT 814 Frasier, Gary W.
grain and seed in the audiofrequency		Edgerton, E. R.	Protective spray coatings for water
rangeT	348	Holding-time measurement in an ultra-	harvesting catchments T 292
Corley, Tom E.	- 1-	high-temperature, direct-steam-injec-	Freeman, P. A.
Performance relations for a saw-grid		tion systemT 695 Edison, A. R.	Automation of surface irrigation with
seed cotton cleanerT	171	A bridge method for dielectric meas-	fluidic divertersT 357
Correlation of mechanical harvesting	700	urements of grain and seed in the 50-	Freitag, Dean R.
with cotton plant characteristicsT	768	to 250-MHz range T 18	Similitude studies of soil machine sys-
Coulthard, T. L.	430	Edminster, T. W.	temsT 201 Fridley, R. B.
Water quality surveyT Craine, Lloyd B.	430	Agricultural engineering research: im-	Formulation of forced vibrations of
Electric potentials and domestic wa-		pact on people and agriculture 201	tree limbs with secondary branchesT 138
ter supplies	415	Edwards, D. M.	Measurement of vibrations related to
Cramer, C. O.		Undergraduate teaching techniques and innovations used for professional	harvesting and handling of fruits and
Effects of housing and protein levels		coursesUE 115	vegetables 870
on winter growing and finishing of		Moisture sensor placement for regu-	Effect of proportional, nonproportional
swineT Criddle, Wayne D.	520	lation of furrow-irrigation systems T 303	and nonlinear damping on dynamic
Projections - Irrigation engineering by		Edwards, R. L.	response of tree limbs T 879
year 2020	244	Heat-stress effects on reproduction in	Frisby, James C. Estimating good working days avail-
Cross, O. E.		gilts T 832	able for tillage in central Missouri T 641
Anaerobic decomposition of swine ex-		Edwards, W. M. No-tillage corn – characteristics of the	Frost, K, R.
crementT	320	system 128	Pesticide drift from aerial and ground
Curley, Robert G.		Ehlers, Melvin H.	applications 460
Storing wafered hay	22	Electric potentials and domestic water	
Currence, H. David The analysis of soil surface roughness.T	710	supplies 415	G
Curry, Norval H.	710	El-Domiaty, Awatif M.	Garner, T. H.
The national scene for the year 2000:			
		Stress-strain characteristics of a satu-	now uniform mixing of triffuralin at-
professional societies - engineers	192	rated clay soil at various rates of	How uniform mixing of trifluralin affects weed control
professional societies – engineers Planning ASAE national headquarters.	192 241	rated clay soil at various rates of strainT 685	fects weed control 470 Garrett, Roger E.
professional societies – engineers Planning ASAE national headquarters. Dedication of ASAE headquarters	241	rated clay soil at various rates of strain	fects weed control 470 Garrett, Roger E.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building	241 367	rated clay soil at various rates of strain	fects weed control
professional societies — engíneers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man	241	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E.	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E.
professional societies — engineers Planning ASAE national headquarters Dedication of ASAE headquarters building For the benefit of man Curry, R. B.	241 367	rated clay soil at various rates of strain	fects weed control
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a	367 455	rated clay soil at various rates of strain	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir	367 455	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 869	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of water-	367 455 654	rated clay soil at various rates of strain	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description	367 455 654	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature pro-	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface descriptionT Curtis, James O. Slotted wood floors for swine	367 455 654	rated clay soil at various rates of strain	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F.
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man . Curry, R. B. Simulating flood routing through a reservoir	241 367 455 654 462	rated clay soil at various rates of strain	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description	241 367 455 654 462 310	rated clay soil at various rates of strain T 685 Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C.	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man . Curry, R. B. Simulating flood routing through a reservoir	241 367 455 654 462 310	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agri-	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T. 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T. 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraintsT	241 367 455 654 462 310	rated clay soil at various rates of strain	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man	241 367 455 654 462 310	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and in-	fects weed control 470 Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints T D Davidson, J. I. Jr.	241 367 455 654 462 310	rated clay soil at various rates of strain	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artifi-
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints T Davidson, J. I. Jr. Drying farmer's stock peanuts at 40	241 367 455 654 462 310 732	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F T	241 367 455 654 462 310 732	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Tavis John R	241 367 455 654 462 310 732	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints T D D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F T Davis, John R. Projections—Trends in engineering ed-	241 367 455 654 462 310 732	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints	241 367 455 654 462 310 732	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Tovis, John R. Projections — Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on auto-	241 367 455 654 462 310 732 444 223	rated clay soil at various rates of strain T 685 Elliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 859	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T417 Givens, R. L. Use of activity cameras in livestock studies T317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T523
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering T	241 367 455 654 462 310 732 444 223	rated clay soil at various rates of strain T 685 Elliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 III. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on auto-
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Teason Douglas L.	241 367 455 654 462 310 732 444 223	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints T Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Teason, Douglas L. Network analysis in agricultural sys-	241 367 455 654 462 310 732 444 223 678	rated clay soil at various rates of strain T 685 Forest engineering – post baccalaureate FC 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain T 61	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F. Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Network analysis in agricultural systems engineering T	241 367 455 654 462 310 732 444 223 678	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W.	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Torying farmer's stock peanuts at 40 and 60 F Tovis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Toexon, Douglas L. Network analysis in agricultural systems engineering Teaton, J. W.	241 367 455 654 462 310 732 444 223 678	rated clay soil at various rates of strain T 685 Strain T 685 Fliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 844 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W. Thermal conductivity of dry milk in a	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high wa-
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description T Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Toavis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Teason, Douglas L. Network analysis in agricultural systems engineering Teason, J. W. Designing poultry house ventilation	241 367 455 654 462 310 732 444 223 678	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 611 Farrall, A. W. Thermal conductivity of dry milk in a packed bed T 391	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 386 Good. Larry D.
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man . Curry, R. B. Simulating flood routing through a reservoir . Theoretical considerations of watershed surface description	241 367 455 654 462 310 732 444 223 678	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 III. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 38
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B. Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Torying farmer's stock peanuts at 40 and 60 F Tovis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Toeaton, J. W. Designing poultry house ventilation systems Factors affecting design criteria for ventilation of windowless broiler	241 367 455 654 462 310 732 444 223 678 849 523	rated clay soil at various rates of strain T 685 Strain T 685 Fliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H.	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 38
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man . Curry, R. B. Simulating flood routing through a reservoir . Theoretical considerations of watershed surface description	241 367 455 654 462 310 732 444 223 678 849 523	rated clay soil at various rates of strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 III. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution I. analog simulation T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed elec-	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 676 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 365 Goodenough, J. L.
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636	rated clay soil at various rates of strain T 685 Strain T 685 Fliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 844 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 47 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 38 Good, Larry D. A comparison of ventilation control systems . T 365
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 II. quasili	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 67 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 365 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T 354
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building	241 367 455 654 462 310 732 444 223 678 849 523 636	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 844 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T Gasman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 67 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 365 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T 354 Agricultural chemicals and our water
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636 648	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 854 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study of radiant heating of rice grain T 644	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing 36 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T417 Givens, R. L. Use of activity cameras in livestock studies T317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T52 Effect of tractor parameters on automatic steering Carry D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T600, 12 Typ. A comparison of ventilation control systems T600d. Larry D. A comparison of ventilation control systems T600d. Larry D. Effect of direct current glow discharge on germination of cottonseed T600drich, Philip R. Agricultural chemicals and our water resources
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Dayis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Deson, Douglas L. Network analysis in agricultural systems engineering Peaton, J. W. Designing poultry house ventilation systems engineering design criteria for ventilation of windowless broiler houses Mathematical modeling of thermal homeostasis in a chicken Teleood damage to crops in depression areas of north-central lows T	241 367 455 654 462 310 732 444 223 678 849 523 636 648	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 859 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 854 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study of radiant heating of rice grain T 644 Ferguson, James A. Instrumentation and temperature con-	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 365 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T 354 Groudorich, Philip R. Agricultural chemicals and our water resources 358
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters. Dedication of ASAE headquarters. Duilding For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Teason, Douglas L. Network analysis in agricultural systems engineering Designing poultry house ventilation systems engineering design criteria for ventilation of windowless broiler houses TeBoer, D. W. Flood damage to crops in depression areas of north-central lowa TeForest, S. S. Agri-Business in the year 2000	241 367 455 654 462 310 732 444 223 678 849 523 636 648	rated clay soil at various rates of strain T 685 Strain T 685 Fliwood, E. L. Forest engineering – post baccalaureate FF 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrail, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study of radiant heating of rice grain T 644 Ferguson, James A. Instrumentation and temperature control of quarded hot-plate system for	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T417 Givens, R. L. Use of activity cameras in livestock studies T317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T52 Effect of tractor parameters on automatic steering Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T36 Good, Larry D. A comparison of ventilation control systems T36 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T36 Goodrich, Philip R. Agricultural chemicals and our water resources Insecticide adsorption on activated
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636 648	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 859 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 337 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 854 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study of radiant heating of rice grain T 644 Ferguson, James A. Instrumentation and temperature control of guarded hot-plate system for measuring thermal properties of seed	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 676 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 360 Good, Larry D. A comparison of ventilation control systems T 360 Goodrich, Philip R. Agricultural chemicals and our water resources 358 Insecticide adsorption on activated Carbon T 567 Gradwohl, Don R.
professional societies — engineers Planning ASAE national headquarters. Dedication of ASAE headquarters building For the benefit of man Curry, R. B., Simulating flood routing through a reservoir Theoretical considerations of watershed surface description Curtis, James O. Slotted wood floors for swine Collapse loads of wooden columns with various eccentricities and end restraints D Davidson, J. I. Jr. Drying farmer's stock peanuts at 40 and 60 F Davis, John R. Projections—Trends in engineering education during next 50 years Day, C. LeRoy Effect of tractor parameters on automatic steering Teason, Douglas L. Network analysis in agricultural systems engineering Peasinn Douglas L. Network analysis in agricultural systems engineering design criteria for ventilation of windowless broiler houses Teffect of caclimation on partitioning TeForest, S. S. Agri-Business in the year 2000 Effect of acclimation on partitioning	241 367 455 654 462 310 732 444 223 678 849 523 636 648 547 186	rated clay soil at various rates of strain T 685 Strain T 685 Fliwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 864 Esmay, M. L. Wall-jet velocity and temperature profiles resulting from a ventilation inlet. T 77 Air-flow characteristics of a scale model chamber T 307 Evans, R. C. The role of the next generation of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farrall, A. W. Thermal conductivity of dry milk in a packed bed T 391 Farris, John A. Why ultra-fine filtration? 280 Fathauer, George H. Measuring a dairy cow's feed electronically 82 Faulkner, Macon D. An analytical and experimental study of radiant heating of rice grain T 644 Ferguson, James A. Instrumentation and temperature control of guarded hot-plate system for measuring thermal properties of seed cotton T 155	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 417 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 676 Goddeng, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 360 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T 354 Goodrich, Philip R. Agricultural chemicals and our water resources 358 Insecticide adsorption on activated carbon T 56 Goddwohl, Don R. Developing a selective asparagus har-
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636 648 547 186	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 II. quasilinearization T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farris, John A. Why ultra-fine filtration? Fathauer, George H. Measuring a dairy cow's feed electronically Measuring a dairy cow's feed electronically Measuring a dairy cow's feed electronically Measuring thermal or poertical system for measuring thermal properties of seed cotton T 155 Finney. Essex E. Jr.	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 47 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 36 Good, Larry D. A comparison of ventilation control systems T 364 Goodrich, Philip R. Agricultural chemicals and our water resources 156 Gradwohl, Don R. Developing a selective asparagus harvester 139
professional societies — engineers . Planning ASAE national headquarters Dedication of ASAE headquarters building . For the benefit of man . Curry, R. B. Simulating flood routing through a reservoir . Theoretical considerations of watershed surface description	241 367 455 654 462 310 732 444 223 678 849 523 636 648 547 186	rated clay soil at various rates of strain	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garrett, Roger E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 60 Godderg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 36 Goodenough, J. L. Effect of direct current glow discharge on germination of cottonseed T 354 Goodrich, Philip R. Agricultural chemicals and our water resources 358 Insecticide adsorption on activated carbon T 56 Gradwohl, Don R. Developing a selective asparagus harvester 139
professional societies — engineers . Planning ASAE national headquarters. Dedication of ASAE headquarters building . For the benefit of man	241 367 455 654 462 310 732 444 223 678 849 523 636 648 547 186 82	rated clay soil at various rates of strain T 685 Strain T 685 Ellwood, E. L. Forest engineering – post baccalaureate FE 60 Erickson, L. E. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization T 859 III. quasilinearization of agricultural engineers in the farm equipment industry – professional and industrial challenges UE 48 F Fan, L. T. Modeling feedlot runoff pollution T 859 II. quasilinearization T 859 II. quasilinearization T 859 II. quasilinearization T 859 II. quasilinearization T 864 Farmer, D. M. Use of digital computer for efficient drying of high-moisture, cereal-grain dough T 61 Farris, John A. Why ultra-fine filtration? Fathauer, George H. Measuring a dairy cow's feed electronically Measuring a dairy cow's feed electronically Measuring a dairy cow's feed electronically Measuring thermal or poertical system for measuring thermal properties of seed cotton T 155 Finney. Essex E. Jr.	fects weed control Garrett, Roger E. Use of gamma ray transmission in selecting lettuce for harvest T 820 Garton, James E. The hydraulics of an automated furrow irrigation system with rectangular side weir outlets T 746 Gassman, M. P. Power weight transfer systems for towed implements 28 German, Rae F. The need for forest engineers in manufacturing FE 21 Gilbertson, Conrad B. The case of the misguided number or "you don't say" 511 Gill, William R. Determination of oil content of artificial soils T 47 Givens, R. L. Use of activity cameras in livestock studies T 317 Goering, Carroll E. Developing an automatic steering system for a hydrostatic vehicle T 523 Effect of tractor parameters on automatic steering T 678 Goldberg, D. Drip irrigation — a method used under arid and desert conditions of high water and soil salinity T 36 Good, Larry D. A comparison of ventilation control systems T 364 Goodrich, Philip R. Agricultural chemicals and our water resources 156 Gradwohl, Don R. Developing a selective asparagus harvester 139

UM

Graversen, Curt	Hattin, Murray W.	Howells, David H.
Prepared discussion of papers on	Future requirements in manufactur-	Agriculture and man's environment 360
forestry training for engineers in man- ufacturingFE 38	ingFE 28 Haugh, C. Gene	Howlett, Freeman S. CO ₂ enrichment for vegetable produc-
Gray, Don M.	Connecting a gas chromatograph to an	tionT 252 Howlett, Myles R.
Unlined mole lines for irrigationT 661 Grovum, M. A.	analog computer	U. S. Forest Service requirements FE 47
An automatic guidance system for	Hawthorne, P. L.	Huang, B. K.
farm tractorsT 565 Grummer, R. H.	Foam protects strawberries during freeze	Computer methods in silencer design .T 597 Huber, Samuel G.
Effects of housing and protein levels	freeze	The development of a planetary-vac-
on winter growing and finishing of swine T 520	Physical properties of nonfat dry milk as influenced by spray drying condi-	uum seed metering device 803 Hudspeth, Elmer B. Jr.
Guitiens, J. C.	tionsT 723 Hazen, T. E.	A planter for precision depth and
Hydraulic conductivity sampling for confidence	Developing technical competence re-	placement of cottonseed
Gunlogson, G. B.	garding the engineering aspects of	Connecting a gas chromatograph to
Environmental problems – a new area of engineering for the 70's 277	animal productionUE 77 Hedden, Scott L.	an analog computer 76 Hundtoft, Elgin B.
Gustafson, M. Lee	Design and performance of an experi-	Determining specific gravity of alfalfa
Requirements of the Forestry Equip- ment ManufacturerFE 16	mental citrus fruit pick-up machineT 406 Hedrick, T. I.	solids by nonlinear least-squares methodT 181
	Thermal conductivity of dry milk in a	Hunt, D. R.
H	Physical properties of nonfat dry milk	Vehicle-design concept to fully utilize the potential of hydrostatic drives T 482
Hahn, LeRoy	as influenced by spray drying condi-	Application of mathematical formulas
Data acquisition in environmental re- search	tionsT 723 Heermann, D. F.	to repair cost data T 806 Hutchinson, J. R.
Feasibility of evaporative cooling for	Efficient border irrigation design and	Formulation of forced vibrations of
dairy cattle based on expected pro- duction losses	operationT 126 Pressure distribution on a center-pivot	tree limbs with secondary branches T 138 Effect of proportional, nonproportional
Hahn, Russell H.	sprinkler irrigation system T 556	and nonlinear damping on dynamic re-
Voluntary standardization and ASAE 231 Haise, H. R.	Heldman, Dennis R. Relationships between aerosol disper-	sponse of tree limbs 7 879 Hutchison, R. S.
Automation of surface irrigation with	sion and air turbulence in a food pack-	Drying farmer's stock peanuts at 40
fluidic divertersT 357 Hall, Carl W.	aging areaT 14 Air-flow characteristics of a scale mod-	and 60 FT 444 Huxsoll, C. C.
Agricultural engineering - and the fu-	el chamberT 307	Effects of sonic irradiation on drying
ture food supply	Small particle re-entrainment from horizontal surfacesT 387	rates of wheat and shelled cornT 21
rates of wheat and shelled cornT 21	Thermal conductivity of dry milk in a	
The role of the next generation of ag-	packed bedT 391 Physical properties of nonfat dry milk	1
ricultural engineers in food production processingUE 54	as influenced by spray drying condi-	Ifft, Theodore H. Solving erosion and sedimentation
Cross-sectional area measurement of	tionsT 723 Hellickson, Mylo A.	problems 701
alfalfa stemsT 577 Hall, Glenn E.	Evaluation of equipment performance	Isaacs, Gerald W. Anticipated opportunities and limita-
Corn kernel crackage induced by me-	in controlled environment broiler chambersT 622	tions for agricultural engineering ed-
chanical shellingT 51 Cross-sectional area measurement of	Hellwig, Robert E.	ucationUE 6
alfalfa stemsT 577	Effect of partially field curing on en- ergy requirements for processing and	
Hall, M. J. Use of the stain method in determi-	pelleting coastal bermudagrass T 315	J
ning the drop-size distributions of	Henderson, J. M. Physical properties of eggshellT 436	Jacobson, P.
coarse liquid sprays	Stress analysis of eggshell T 440	Erosion control in New Brunswick (Canada) T 459
Analysis of stress during impact of	Henderson, S. M.	Jedele, Donald G.
fruit considered to be viscoelastic T 893 Hamdy, M. Y.	This rotating phytotron follows the sun 282 Equilibrium moisture content of small	Urbanization and the livestock indus- try
Simulating flood routing through a	grain – hysteresis T 762	Jensen, A. H.
reservoir	Hendrick, James G. An electronic hand-operated recording	Slotted wood floors for swine 310 Jensen, Loren D.
Analysis and hybrid simulation of deep-bed drying of grain	penetrometerT 385	Building engineering courses upon a
Hammerle, James R.	Hennessy, Wesley J. The hidden migration	biological backgroundUE 74 Jewett, J. W.
Photomicrometric measurements of di- mensions	Hensler, R. F. Effect of method of manure handling	Developing the JD540
The design of sweet potato machinery. T 281	on crop yields, nutrient recovery and	Johannes, R. F. Effect of method of manure handling
Tensile relaxation modulus of corn horny endosperm as a function of	runoff losses	on crop yields, nutrient recovery and
time, temperature and moisture con-	Moisture sorption of burley tobacco T 466	runoff losses
tent	Herold, Ken To economically water citrus trees 651	Measurement of hypothalamic temper-
vegetable abrasion resistance 7 672 Hammond, Walter C.	Hiler, Edward A.	ature and heart rate of poultry T 342 Johnson, Hunter Jr.
Hammond, Walter C. Collapse loads of wooden columns	A creative engineering design course at the freshman levelUE 128	Sprinklers and vegetable crop mech-
with various eccentricities and end	Hinkle, Charles N.	anization in desert areas 20 Johnson, Loyd
restraintsT 737 Hansen, Clarence M.	Maintaining one hundred percent rela-	Asian tropical rice land preparation:
A machine for separating cherries	tive humidity in an alternating-tem- perature seed germination chamber T 194	defining the problem
without stems from those with attached stems	A comparison of ventilation control systemsT 365	To plant vegetables with seed wafers . 566 Johnson, William H. (Kansas)
Hansen, Hugh J.	Hitzhusen, Thomas E.	Remote measurement of concentra-
Projections – Electromation in agricul- ture during next 50 years	Beefmaker II: developing a total corn harvester	tion and height of heads of standing grain with microwave energy 28
Hansen, R. W.	Hoag, Dean L.	Corn kernel crackage induced by me-
Mechanical separation of stones from potatoes with rotary brushesT 591	Effect of proportional, nonproportional and nonlinear damping on dynamic re-	chanical shellingT 51 Tillage-tool interaction with a bound-
Hague, S. M.	sponse of tree limbs T 879	ed, artificial soilT 409
The mechanization of agriculture in Pakistan	Hobgood, Price Mechanical harvester for fresh market	Response of tillage systems as influenced by soil type
Harl, Neil E.	onionsT 517	Jones, Benjamin A. Jr.
Handling the legal problems 704 Harmon, G. R.	Hoffman, Glenn J. Design and performance of sunlit cli-	ASAE headquarters 239
Future trends in forest engineering FE 64	mate chambers T 656	Collapse loads of wooden columns with various eccentricities and end re-
Harper, W. J. Location of slowest cooling zone and	Holekamp, James A. Forest engineering in the pulp and	straints 737
rate of cooling of homogenized milk	paper industryFE 39	Jones, Victor A. Holding-time measurement in an ul-
in various containers T 433 Harriott, B. L.	Holley, W. D. CO ₂ enrichment for flower production .T 257	trahigh-temperature, direct-steam-in-
Mechanisms, culture and varieties for selective mechanical cantaloupe har-	Holtman, J. B.	jection system T 695 Jordan, K. A.
vest T 48	Linear and nonlinear applications of mathematical programmingT 854	Effect of acclimation on partitioning of heat loss by the laying henT 82
A packaged environment system for	Hook, Richard W.	Jorgensen, J. L.
precision planting T 550 Harris, Wesley L.	Providing depth control for integral flexible implements 560	A bridge method for dielectric meas-
Effects of thermal energy treatments	Hool, J. N.	urements of grain and seed in the 50- to 250-MHz range
on the alfalfa weevilT 799 Harrison, John Y.	Future trends in forest engineering FE64 Howard F. W.	
Application of a dynamic simulator in	Fluidic control of hydrostatic tractor	К
seat testing T 378 Harrold, Lloyd L.	transmissions	Kahl, William H.
No-tillage corn - characteristics of the	Efficient border irrigation design and	Is mechanically harvesting pineapple
system 128	operationT 126	practical? 564

Kang, S. F.	Lambert, Jerry R.	Maddox, Thomas E.
Modeling feedlot runoff pollution I. analog simulation	A modified inflow-outflow method of	Temperature preferences of chicks T 788
II. quasilinearization	measuring infiltration in furrow irrigation T 792	Magee, Kenneth L. Metrication: a must?
Kato, David S.	gation	Mahoney, George W. A.
Temperature telemetry from swine 652 Kattan, Ahmed A.	namic parameters in an artificial soil .T 580	Heat-stress effects on reproduction in gilts
Development of mechanical harvesting	Lanham, Frank B.	Maki, T. E.
and grading equipment for strawber-	Developing the professional man in four years UE 110	Forest engineering – post baccalau- reate
ries	Larsen, W. E.	Manbeck, H. B.
Sprinkler intensity and soil tilthT 118 Model theory for predicting process_	Vehicle-design concept to fully utilize the potential of hydrostatic drives T 482	Anaerobic and aerobic vacuum tech- niques for mycotoxin-free peanut dry-
of leaching T 362	Law, James P. Jr.	ing T 93
Control of soil moisture during sprink- ler irrigation T 885	Impact of agricultural pollutants on water usersT 474	Manceau, J. R.
Kemp, Arne K.	Lee, E. S.	Physical properties of eggshell T 436 Stress analysis of eggshell 440
Prepared discussion of public engi- neering research laboratory needs FE 56	Modeling feedlot runoff pollution I. analog simulation	Mangold, D. W.
Keppeler, R. A.	II. quasilinearizationT 864	Developing technical competence re- garding the engineering aspects of
Thermal properties of frozen sucrose	Lee, J. H. A.	animal productionUE 77
solutionsT 335 Method of predicting thermal proper-	Aerodynamic separation in a combine shoe	Manor, Gedaliahu Field comparison of land smoothers .T 639
ties of frozen sucrose-corn syrup sol-	Lembke, Walter D.	Manson, John E.
ids solutionsT 554 Khan, Amir U.	A model study of drain envelopes in a coarse-silt base material T 669	Simulation of a time-shared automa-
Mechanizing the tropical farm 640	Lemon, Edgar	tically controlled c-a apple storage 472 Analog simulation of a time-shared,
Kincaid, D. C. Pressure distribution on a center-pivot	The exchange of carbon dioxide be- tween the atmosphere and the plant .T 238	automatically controlled c-a apple
sprinkler irrigation systemT 556	Lenker, D. H.	storage T 574 Marchello, J. M.
King, W. W. Prepared discussion of public and pri-	Development of an auger picking head for selectively harvesting fresh market	Effects of thermal energy treatments
vate forest engineering needsFE 53	orangesT 500	on the alfalfa weevil
Kirk, Ivan W.	Lentz, Gary L. Movement of agricultural fertilizers	Beefmaker II: developing a total corn
Performance relations for a saw-grid seed cotton cleaner	and organic insecticides in surface	harvester
Performance relations for agricultural	runoff	to predict tractor tipping behavior T 67
machinery systems through response surface methodologyT 514	Mechanical means of harvesting ber-	Marsh, Albert W.
Klinge, Albert F.	riesT 795	Sprinklers and vegetable crop mechanization in desert areas 20
The agricultural engineer's role in en-	LePori, Wayne Mechanical harvester for fresh market	Marshall, Dale E.
vironmental control	onionsT 517	Design and performance of an experi-
CO ₂ systems for growing plantsT 263 Knapp, L. W. Jr.	Leppert, A. M. Future trends in forest engineering . FE 64	mental citrus fruit pick-up machine .T 406 Mason, M. E.
Small tractor operator position and	Levin, Jordan H.	Anaerobic and aerobic vacuum tech-
safety behavior 456	Weight-volume relationships of tart and sweet cherries	niques for mycotoxin-free peanut dry- ing
Knuckles, B. E. Alfalfa products by wet fractionation .T 198	A machine for separating cherries without stems from those with at-	Matlock, William G.
Ko, R. S.	without stems from those with at- tached stems T 539	Mathematical analysis of groundwa-
Dielectric constant of wheat straw T 42 Koch, J. A.	Firmness and pitter loss studies of	ter recharge
Verification of a mathematical model	tart cherries T 810	The control and effects of supplemen-
to predict tractor tipping behavior T 67 Koelliker, J. K.	Levine, G. Determining oat grain moisture con-	tal carbon dioxide in air-supported plastic greenhouses
Use of soil to treat anaerobic lagoon	tent by neutron scattering	Matthews, Edwin J.
effluent renovation as a function of depth and application rate 496	Leviticus, L. I. Discussion of "similitude studies of	Chloride tracer evaluation of herbicide
Kohler, G. O.	soil machine systems" T 213	incorporation tools
Alfalfa products by wet fractionation .T 198 Koten, Donald E.	Lewis, David C. Agricultural engineers versus agricul-	Photomicrometric measurements of di-
Schools of forestry can develop for-	tural workers 347	mensions 26 McCool, D. K.
est engineeringFE 6 Kottman, Roy M.	Liang, Tung A systems approach to optimizing pa-	Effect of vegetal length and spatially
The role of small undergraduate de-	paya fruit-package weight control T 133	varied flow on velocity distribution coefficients
partments in a multiversityUE 35 Kranich, F. N. G.	Farm machinery maintenance A renewal process model for predict-	McCormick, Brooks
Agricultural engineering 512	ing inventory demand	One cloth to be worn intact 368 McCcy, R. R.
Kranzler, G. A. Mechanical transfer cage for flying	Scheduling preventive maintenance by	Developing power transmission fluids
insectsT 151	dynamic programming Markov chain method	for agriculture 348
Kratky, B. A. To plant vegetables with seed wafers . 566	Systems approach to design of sprink-	McDow, J. J. Effect of direct current glow dis-
Krause, David E.	ler irrigationT 618 Liljedahl, J. B.	charge on germination of cottonseed .T 354
Developing a roll wafering machine: a progress report	Use of cases in teaching engineering	McFarland, T. David 1970: beginning a new era for ASAE 233
Kretchman, Dale W.	design coursesUE 122	McGraw, R. N.
CO ₂ enrichment for vegetable produc-	Lillard, James H. Professional engineering registration . 88	A practical platform for infrared aerial photography
tionT 252 Kriz, George J.	Link, David A. Asian tropical rice land preparation:	McGuinnes, J. L.
For pollution studies: an automatic	defining the problem 286	Influence of land use on runoff from agricultural watershedsT 187
liquid sampler	Farm machinery maintenance -	McRae, G. Neil
flooding, depth-of water table and soil	A renewal process model for predict- ing inventory demand	Sprinklers and vegetable crop mech- anization in desert areas
gaseous compositionT 216 Ditch drainage of anisotropic nonhe-	Scheduling preventive maintenance by	Mears, David R.
mogeneous porous media: a model	dynamic programming Markov chain method	Experimental circular dairy barn 78 Methods of accelerating forage drying T 531
study	Applications of systems techniques to	Meier, Ned H.
CO ₂ systems for growing plantsT 263	design and planning-agricultural sys-	Measuring tractor noise at the Ne-
Kruse, E. G.	tems engineering—survey of simula- tion techniques and applications to	braska Tractor Testing Laboratory 142 Mendel, V. E.
Automation of surface irrigation with fluidic diverters	agricultural problems 837	Influence of space on performance of feedlot cattle
Krutz, G. W. Performance characteristics and feed-	Longhouse, Alfred D. Evaluation of equipment performance	Merva, G. E.
er design in pneumatic conveying of	Evaluation of equipment performance in controlled environment broiler chambers	Theoretical considerations of water- shed surface descriptionT 462
chopped forage T 332	Chambers T 622	Miller, David C.
Kummer, F. A. Performance relations for a saw-grid	Forest engineering in a college of engineeringFE 10 Lovely, Walter G.	The need for technological literacy 509 Miller, Walker
seed cotton cleanerT 171	Lovely, Walter G.	To economically water citrus trees 651
Kunze, O. R. Effects of 100F and 115F blackbody	The analysis of soil surface roughnessT 710 Luth, H. L.	Millier, W. F.
radiation on flight activity of stable	Discussion of "similitude studies of	Drying the alfalfa stem
flies T 328	soil machine systems"T 212 Lynd, J. Q.	Metering of granular fertilizers: application of the plasticity theory to pre-
L	Anaerobic and aerobic vacuum tech-	diction of the flow patternT 699 Miner, J. Ronald
Laflen, J. M.	niques for mycotoxin-free peanut dry- ing T 93	Raising livestock in the urban fringe . 702 Use of soil to treat anaerobic lagoon
Surface runoff from graded lands of low slopes		effluent renovation as a function of
Lalor, William F.	Madday B I	depth and application rateT 496
Effects of thermal exposure on the foliage of young corn and soybean	Maddex, R. L. Prepared discussion on student needs	Miranda, S. M. Determining oat grain moisture con-
plantsT 534	and trendsFE 67	tent by neutron scattering

UM

Mitchell, J. P.	0	R	
Using an x-ray image scan to sort bruised apples	O'Brien, Michael	Rath, Carl J.	
Moden, Walter L. Jr.	Is mechanically harvesting pineapple practical:	Developing a roll wafering machine: a progress report	405
A practical platform for infrared aerial photography 52	Mechanical means of harvesting ber riesT 795	Rawlins, Stephen L. Design and performance of sunlit cli-	
Moe, D. L. Changes in students in the 1970's UE 3.	Measurement of vibrations related to	mate chambersT	656
Moffett, Lee	harvesting and handling of fruits and vegetablesT 870	Reece, Floyd N. Designing poultry house ventilation	
Is mechanically harvesting pineapple practical?		systems	523
Mohsenin, Nuri N. Developing technical competence re-	pneumatic conveying of uniform and	Factors affecting design criteria for ventilation of windowless broiler	
garding the engineering aspects of	mixed-size particles in vertical pipes .T 732 Olafson, E. A.	housesT Mathematical modeling of thermal ho-	636
physical properties of agricultural ma- terialsUE 9	Fracion control in Now Drungwick	meostasis in a chickenT	648
Tensile relaxation modulus of corn horny endosperm as a function of	Olsen, Norris C.	Reed, W. B. Determining distribution pattern of	
time, temperature and moisture con-	The need for uniform standards for forest equipment 706	dry-fertilizer applicatorsT Rehkugler, G. E.	85
tentT 37. Monke, Edwin J.	Olsen, R. J. Effect of method of manure handling	Dynamic analysis of automatic control	205
Agricultural chemicals and our water resources	on crop yields, nutrient recovery and	of combine header heightT Renoll, E. S.	225
Insecticide adsorption on activated carbon	runoff lossesT 726 Olson, H. M.	A method for predicting field-machin- ery efficiency and capacityT	448
Moore, Glen F.	cet mounting T 1/2	Rhoten, M. L. Using an x-ray image scan to sort	
Thermal defoliator developments T 782 Moore, James A.	Omtvedt, I. T. Heat-stress effects on reproduction in	bruised apples	356
The future of farm animal waste management	giltsT 832	Ricca, V. T. Influence of land use on runoff from	
Morrison, Stanton R. Influence of space on performance of	Feasibility of evaporative cooling for	agricultural watershedsT Rice, Charles E.	187
feedlot cattleT 14	dairy cattle based on expected production losses	Prepared discussion on forest engineering student needsF	E 70
Use of activity cameras in livestock studies		Richardson, Boone Y.	_ /0
Mottola, A. C. Alfalfa products by wet fractionation .T 198	P P	Projections – The future of forest en- gineering	279
Mowbray, Phillip G. Sprinklers and vegetable crop mech-	Pallas, J. E. Jr. Theoretical aspects of co ₂ enrichment T 240	Effects of articulated steering on trac-	
anization in desert areas 20	Papay, A. G. Developing power transmission fluids	tive performance of a rubber-tired logging tractorT	633
Mowry, George R. A simplified engineering design equa-	for agriculture 348 Parish, R. L.	Ritter, W. F. Flood damage to crops in depression	
tion for a thermoelectric heating-cooling device	Developing an automatic steering sys-	areas of north-central lowaT Robbins, J. W. D.	547
Murphy, Kenneth E. Power weight transfer systems for	Park, J. H.	For pollution studies: an automatic	700
towed implements 28	Mechanisms, culture, and varieties for selective mechanical cantaloupe har-	liquid sampler	
Providing depth control for integral flexible implements 560	T 40	Erosion control in New Brunswick (Canada)T	459
Myers, Lloyd E. Protective spray coatings for water_	Small tractor operator position and	Roberts, William J. Experimental circular dairy barn	78
harvesting catchmentsT 292 Myers, R. G.	safety behavior	Methods of accelerating forage drying T	
Moisture sensor placement for regula- tion of furrow-irrigation systems T 303	Performance relations for agricultural machinery systems through response	Robinson, Frank E. Modifying an arid microclimate with	
tion of furlow-inflation systems 1 300	surface methodology T 514 Paulson, W. H.	sprinklers	465
N	Effect of method of manure handling on crop yields, nutrient recovery and	Ditch drainage of anisotropic nonho- mogeneous porous media: a model	
Nance, Luke A. Jr.	runoff lossesT 726	studyT	626
A modified inflow-outflow method of measuring infiltration in furrow irri-	Peart, Robert M. Applications of systems techniques to	Rodgers, Paul D. Surface film coefficients for linearly	
gationT 792 Narayan, C. V.	design and planning – agricultural systems engineering introduction T 835	converging ductsT Rogers, W. F.	421
Behavior under high pressure of wheat grains in bulk	Network analysis in agricultural systems engineering	A portable infiltrometer	469
Neal, Allan E.	Person, Nat K. Jr.	Frame-foundation interaction in the	70
Laboratory testing of rice combines T 824 Nelson, D. K.	Comparative drying rates of selected forage crops	analysis of hingeless rigid framesT Roller, Warren L.	
Electric potentials and domestic water supplies 415	Persson, S. Wall-jet velocity and temperature pro-	Temperature Telemetry from Swine Romig, B. E.	652
Nelson, G. L. Frame-foundation interaction in the	files resulting from a ventilation inlet .T 77 Peterson, R. A.	Metering of granular fertilizers: appli-	
analysis of hingeless rigid frames T 73	Evaluation of equipment performance	cation of the plasticity theory to pre- diction of the flow patternT	699
Anaerobic and aerobic vacuum tech- niques for mycotoxin-free peanut dry-	in controlled environment broiler chambers	Roth, Lawrence O. Spray drop size controlT	779
ing T 93 Determining convective heat transfer	Pettibone, C. Alan The control and effects of supplemen-	Rumble, D. W. Aerodynamic separation in a combine	
coefficients from ellipsoidal shapes T 309 Nelson, Glenn S.	tal carbon dioxide in air-supported	shoeT Rumsey, James W.	6
Development of mechanical harvest-	plastic greenhouses	Detachment characteristics of desert-	
ing and grading equipment for straw- berries	The control and effects of supplemen- tal carbon dioxide in air-supported	grown oranges and grapefruitT Ryland, D. W.	528
Nelson, Stuart O. A bridge method for dielectric meas-	plastic greenhouses	Effect of cab, soundproofing, and ex- haust-control methods on tractor noise	
urements of grain and seed in the 50- to 250-MHz range	Formulation of forced vibrations of tree limbs with secondary branches T 138	at operator's siteT	148
Determining dielectric properties of	Phillips, Richard L.	•	
grain and seed in the audiofrequency range	Solving flooding and drainage prob- lems	S	
A method for determining dielectric properties of grain and seed in the	Phillips, Ross A. Prepared discussion of public and pri-	Saveson, I. L. Surface runoff from graded lands of	
200- to 500-MHz range T 491 Neubauer, L. W.	vate forest engineering needsFE 54 Pochop, L. O.	low slopesT Schafer, Robert L.	340
This rotating phytotron follows the	Sky cover measured by scanning pho-	Similitude studies of soil machine systemsT	201
A comprehensive graphic CRG diagram	tograms 131 Porterfield, J. G.	An electronic hand-operated recording	
for wood columns T 90 Ngoddy, P. O.	Specific heat of Spanish peanuts T 508 Spray drop size control T 779	penetrometerT Schlaphoff, Carl W.	385
A generalized theory of sorption phe- nomena in biological materials – part	Thermal defoliator developments T 782 Power, J. F.	Determining dielectric properties of grain and seed in the audiofrequency	
I, the isotherm equationT 612 Niles, G. A.	Rotating-hoom plot irrigator with off-	range	348
Effects of soil temperature on emer-	set mounting	A concern for agricultural engineers .	359
gence and development of cottonT 511 Nolte, Byron H.	An electronic hand-operated recording penetrometer	Schmer, Gary L. Measuring tractor noise at the Nebras-	
Watershed development for people T 376 Norum, D. I.	Pratt, Marianna Can additional controls on agricultural	ka Tractor Testing Laboratory Schuring, D. J.	142
Unlined mole lines for irrigation T 661 Novak, Robert J.	chemicals create a hungry harvest? 631 Priepke, Edward H.	Discussion of "similitude studies of soil machine systems"T	213
Simulation of a time-shared automa-	Altering physical characteristics of al-	Schwab, G. O.	
tically controlled c-a apple storage 472 Analog simulation of a time-shared, automatically controlled c-a apple	falfa to increase the drying rate T 827 Punjrath, J. S.	Theoretical considerations of water- shed surface descriptionT	462
automatically controlled c-a apple storage	Small particle re-entrainment from horizontal surfaces	Scott, Norman R. Drying the alfalfa.stemT	

Measurement of hypothalamic tem-		Spillman, Charles K.	Influence of land use on runoff from
perature and heart rate of poultry T Sewell, John I.	342	Maintaining one hundred percent rela- tive humidity in an alternating-tem-	agricultural watershedsT 18 Accent the cultural in agricultural en-
Land grading for improved surface		perature seed germination chamber .T 194	gineeringUE 10
drainageT	817	Splinter, W. E.	Agricultural wastes and the environ-
Sexton, H. D. Prepared discussion of papers on for-		Undergraduate preparation for agri- cultural engineering – soil-plant ma-	ment
estry training for engineers in manu-		chine interactionsUE 69	Use of gamma ray transmission in se-
facturingF Shanklin, M. D.	E 36	Applications of systems techniques to design and planning — agricultural sys-	lecting lettuce for harvest 82 Tankersley, E. L.
Sky cover measured by scanning pho-		tems engineering – survey of simu-	Predicting irrigations from climatic
togramsT	131	lation techniques and applications to	data and soil parameters 81
Respiratory fraction of total insensible heat loss from shorn and unshorn		agricultural problems T 837	Taylor, Howard M. Evapotranspiration and drainage from
sheepT	505	Sprague, G. F. World research needs for increasing	the root zone of irrigated coastal ber-
Sharov, N. M.		com production	mudagrass (Cynodon Dactylon L. Pers.) on coastal plains soils 7 42
A similitude study with static and dy- namic parameters in an artificial soil .T	580	Sprinkle, L. W. A similitude study with static and dy-	Taylor, Warren E.
Shenberger, Lester C.		namic parameters in an artificial soil .T 580	Thermal defoliator developments T 78
Maintaining one hundred percent rela- tive humidity in an alternating-temper-		Stahmann, Mark A.	Teague, Howard S. Temperature Telemetry from swine 65.
ature seed germination chamberT	194	Alfalfa protein concentrate for human and animal consumption 412	Tennes, Bernard R.
Shinn, Alvin F.		Stangl, Gerald A.	Weight-volume relationships of tart
The U. S. food supply after enemy at-	710	Distribution analysis of two granular pesticide applicationsT 715	and sweet cherries
Shirley, Herschel V.		Stanley, James N.	A machine for separating cherries without stems from those with at-
Temperature preferences of chicks T Shmueli, M.	788	Electrophysiologically investigating the	tached stems T 53 Firmness and piter loss studies of tart cherries T 81 Thomas, Edward Llewellyn
Drip irrigation - a method used under		optic tract of the tobacco horn-worm mothT 214	tart cherriesT 81
arid and desert conditions of high		Stapleton, H. N.	Thomas, Edward Llewellyn
water and soil salinityT	38	Crop production system simulation T 110	The subtle pollutants
Short, Ted H. The development of a planetary-vac-		Stein, J. R. Water quality survey T 430	Dielectric theory and bioelectrical
uum seed metering deviceT	803	Steinbruegge, G. W.	measurements (part I, theoretical) T 89
Shove, Gene C.		Measuring tractor noise at the Ne-	Thompson, Thomas L. Electric controls for automatic sur-
Potential energy use in low-tempera- ture grain conditioningT	58	braska Tractor Testing Laboratory 142 Stephens, D. F.	face irrigation systems with reuse
Shukla, Lal N.		Heat-stress effects on reproduction in	face irrigation systems with reuse system
Effect of tractor parameters on automatic steeringT	678	gilts	design and planning – agricultural
Sidebottom, O. M.	070	Hurricane Camille: a furious monitor	systems engineering – simulation for optimal grain-dryer design 84-Timmons, John F.
Collapse loads of wooden columns		to builders and rebuilders 75	optimal grain-dryer design 844
with various eccentricities and end re-	727	Stetson, Laverne E. A bridge method for dielectric meas-	Economics in soil and water conser-
straintsT Sievers, Dennis M.	131	urements of grain and seed in the 50-	vation 36
Movement of agricultural fertilizers		to 250-MHz range T 18	Triplett, G. B. Jr. No-tillage corn – characteristics of
and organic insecticides in surface	202	Electric controls for automatic surface irrigation systems with reuse system .T 286	the system
runoffT Simmons, P. W.	323	Determining dielectric properties of	Response of tillage systems as in- fluenced by soil type
Influence of land use on runoff from		grain and seed in the audiofrequency	Tuliv, William P.
agricultural watershedsT Singh, Gopal	187	range	Schools of forestry can develop for-
An inherent bond between concrete		properties of grain and seed in the	est engineeringFE (Turman, E. J.
and plastics	562	properties of grain and seed in the 200- to 500-MHz range	Heat-stress effects on reproduction in
Singley, Mark E.	70	Stewart, Robert E. Projections – Social responsibilities of	giltsT 833
Experimental circular dairy barn Skromme, Arnold B.	78	agricultural engineers during next 50	Turnquist, Paul K. Effect of cab, soundproofing, and ex-
The growth of ASAE and the farm		years 193	haust-control methods or tractor noise
equipment industry 1907-1970	181	Remote measurement of concentra- tion and height of heads of standing	at operator's site
Skromme, Lawrence H. Agricultural engineering abroad	220	grain with microwave energy 28	in agricultural engineering courses UE 125
Slabiak, Walter	220	The animal-environment interface UE 65	Distribution analysis of two granular
Optimizing control systems for elec-		An analysis of animal environmental research needs	pesticide applicationsT 715 Turnquist, R. O.
	694	Stikeleather, Larry F.	Fluidic control of hydrostatic tractor
Slack, Donald C. Properties of greenhouse covering ma-		An active seat suspension system for off-road vehicles	transmissions
terialsT	682	Application of a dynamic simulator in	Projections — Agricultural equipment a
Smemo, A. S. Developing the JD540		seat testing T 378	Projections – Agricultural equipment a half century from now
Smerdon, Ernest T.	18	Field tests of an active-seat suspen-	v
Projections - Soil and water develop-		sion for off-road vehicles 608 Stone, R. B.	V
ments of next half century Anticipated opportunities and limita-	224	Effect of direct current glow dis-	Vanden Berg, Glen E. That "hidden" migration: history now! 597
tions for agricultural engineering ed-		charge on germination of cottonseed .T 354 Storms, James G.	The role of the next generation of ag-
ucationU	E 18	The mobile viner header, pros and	The role of the next generation of ag- ricultural engineers in public service
Smetana, M. M. Performance characteristics and feed-		cons	researchUE 42
er design in pneumatic conveying of	222	Story, A. G. Remote measurement of concentra-	researchUE 42 Vanderholm, Dale H. Use of soil to treat anaerobic lagoon
chopped forageT Smith, David B.	332	tion and height of heads of standing	effluent: design and operation of a field disposal system
Design of a spinning disc, droplet sep-		grain with microwave energyT 28 Strohman, Rollin D.	Van Davan David M. In
arator and the determination of the size and density of droplets deposit-		Connecting a gas chromatograph to	Response of tillage systems as influenced by soil type
ed on cotton foliage	664	an analog computer 76	van Rest, David J.
Smith, E. M.		Stuart, Neil W. CO ₂ systems for growing plantsT 263 Suges, Charles W.	A narvest aid for sugar cane 134
Respiration heat liberated by burley	25	Suggs, Charles W.	van Tienhoven, A.
tobacco during the cureT Smith, John S. Jr.	23	Effect of acclimation on partitioning of heat loss by the laying henT 82	Measurement of hypothalamic tem- perature and heart rate of poultryT 342
Electrophysiologically investigating the		An active seat suspension system for	Vidrine, Clyde
optic tract of the tobacco horn-worm	214	off-road vehicles 99	A mathematical model of heat trans- fer in a pig
Smith, M. Ray		Application of a dynamic simulator in	Virk, K. S.
Computer-assisted instruction in agri-	122	seat testingT 378 Field tests of an active-seat suspen-	Diesel exhaust smoke and barium fuel
cultural engineering designUE Analog simulation of in-flight evapora-	132	sion for off-road vehicles T 608	additives T 758 Vomocil, J. A.
tion of spray dropletsT	587	Sumner, H. R.	Relation of moisture content to failure
Smith, Norman Computer simulation of hydraulic and		Respiration heat liberated by burley tobacco during the cure	strengths of seven agricultural soilsT
pneumatic conveying of uniform and		Sunderland, J. F.	Von Bargen, Kenneth Network analysis in agricultural sys-
mixed-size particles in vertical pipes .T	732	Approximate solution for rate of sub- limation-dehydration of foodsT 559	tems engineering 849
Soderholm, Leo H. An experimental solid state differen-		Sweeten, John M.	von Rumker, Rosmarie Women in engineering professions 557
tial thermostat	86	The hydraulics of an automated fur-	Women in engineering professions 55/
An electrochemical function generator		row irrigation system with rectangu- lar side weir outlets 746	W
for low frequenciesT Sorenson, J. W. Jr.	326	an olde from values arrangement /40	Wacker, E.
Comparative drying rates of selected		T	Determining distribution pattern of dry-fertilizer applicators
forage cropsT Soule, Hayden M. Jr.	352		dry-fertilizer applicators
Investigation of some aerodynamic		Taiganides, E. Paul Wanted: more women engineers in	A high performance a-c electric drive
Investigation of some aerodynamic properties of lowbush blueberriesT	114	agricultural engineering 83	for vehicles
Spencer, R. R. Alfalfa products by wet fractionation .T		Projections – Career opportunities in year 2020	Wakeland, Howard L. Today's Engineering graduate 15
p o j ii e i ii e ii e ii e ii e ii e ii			

How will undergraduate engineering change?U	E 2
Walker, John N. The trajectory of an evaporating water droplet falling in an airstreamT	
Properties of greenhouse covering ma-	
terialsT Plane nonisothermal air jets discharg-	
ing along a smooth ceilingT Walker, William R.	774
Legal restraints on agricultural pollu- tion	636
Slotted wood floors for swine	310
Walton, Linus R. The trajectory of an evaporating water droplet falling in an airstream T Moisture sorption of burley tobacco T Wang, Jaw-Kai	158
To predict precooling rates for toma-	31
toes Mechanical properties of papaya and	369
their dependence on maturityT Wang, Pie-yi	303
To predict precooling rates for tomatoes	31
Thermal conductivity of dry milk in a packed bedT Wanjura, Donald F.	391
A planter for precision depth and placement of cottonseedT	153
Ware, G. W. Pesticide drift from aerial and ground applications	460
Warren, G. F. To plant vegetables with seed wafers.	566
Watson, R. D. A practical platform for infrared aerial photography	526
Webb, B. K. How uniform mixing of trifluralin affects weed control	470
Electrostatic field breakdown phenomena in applying charged particles T	455
Weber, J. A. A similitude study with static and dy- namic parameters in an artificial soil.T	580
The effects of lp-gas injection on a farm-tractor diesel engineT	718
Diesel exhaust smoke and barium fuel	
additivesT Wehrspann, Jerry R. Teleprocessing equipment in dam de-	
welch, G. B.	309
Kinetic friction of cotton seeds as af- fected by several factorsT Weller, S. A.	708
Air-flow characteristics of a scale mod- el chamberT	307
White, Gerald M. Heat transfer in nucleate boiling of sorghum syrupT	594

Plane nonisothermal air jets discharg- ing along a smooth ceilingT Whitehead, W. K.	774
How uniform mixing of trifluralin af- fects weed control	
Performance of an oscillating, forced- air concept for removing citrus fruitT Whitney, L. F.	653
Velocity divergence of hot gases as af- fected by water-vapor releaseT	107
Whittenberger, R. T. Weight-volume relationships of tart and sweet cherries	489
Firmness and pitter loss studies of tart cherriesT	810
Wilcox, Gerald E.	
To plant vegetables with seed wafers. Wilder, L. D.	566
Pushbutton control for water systems management	408
Wildman, Robert D. The national sea grant program	410
Wilkes, L. H. Effects of soil temperature on emergence and development of cottonT	511
Wilkinson, B. W. Fluidized bed electron beam process- ing	469
Williams, Douglas W. Agricultural engineers versus agricultural workers	347
Williamson, R. E. Effect of water-table levels on evapo- transpiration and crop yieldT	168
Response of agricultural crops to flooding, depth-of-water table and soil gaseous composition	216
gaseous' composition	
Winter, Frank Mechanical means of harvesting ber-	
riesT Wismer, Robert D. Similitude studies of soil machine_	/95
systemsT	201
Alfalfa products by wet fractionation.T Wittwer, Sylvan H.	198
Aspects of CO ₂ enrichment for crop production	249
Effect of method of manure handling on crop yields, nutrient recovery and runoff losses	726
Wolfe, R. R. Performance characteristics and feed- er design in pneumatic conveying of chopped forageT	332
Wolken, Leland The effects of Ip-gas injection on a_	710

Woodward, J. D. Drying farmer's stock peanuts at 40 and 60 F	444
of radiant heating of rice grainT	644
Wright, F. S. Photomicrometric measurements of dimensions Wright, James L.	26
The exchange of carbon dioxide be- tween the atmosphere and the plantT	238
Wright, M. E. Specific heat of Spanish peanutsT Wu, I. P.	508
Systems approach to design of sprinkler irrigation	618
Determining specific gravity of alfalfa solids by nonlinear least-squares method	181
Photomicrometric measurements of di- mensions	26
٧	
Yates, Paul	
V-notch weir for submerged flow meas- urement	132
Projections – Land, air and water pollution – its future implications in agricultural engineering	246
Field-curing burley tobacco under plastic	382
the potential of hydrostatic drivesT Young. Roy E.	
Application of a dynamic simulator in seat testingT	378
Z	
Zachariah Gerald I	
Dielectric theory and bioelectrical measurements (part I. theoretical) T Zahradnik, John W.	891
which to build future	230
Analog simulation of a time-shared,	472
automatically controlled c-a apple storageT	574
Zoerb, G. C. Dielectric constant of wheat strawT An automatic guidance system for	42
farm tractors	565
This rotating phytotron follows the sun	282

SUBJECT-MATTER LISTING

ADHESIVES An inherent bond between concrete and plastics (Gopal Singh, J. T. Clayton)	562	restraints (Walter C, Hammond, James O. Curtis, O. M. Sidebottom, Benja- min A. Jones, Jr.)	Г 737	CONTROLLED ATMOSPHERE Analog simulation of a time-shared, automatically controlled CA apple stor- age (John E. Manson, Robert J. Novak,	
AE IN ACTION Michigan polygon parlor – maximum	138	BUILDING DESIGN AND CONSTRUCTION Frame-foundation interaction in the analysis of hingeless rigid frames (T.		John W. Zahradnik) Simulation of a time-shared automati- cally controlled CA apple storage (John E. Manson, Robert J. Novak, John W.	574
in dairy herd management Developing a selective asparagus har-		R. C. Rokeby, G. L. Nelson)		Zahradnik)	472
vester (Don R. Gradwohl)	139	for wood columns (L. W. Neubauer) Slotted wood floors for swine (C. S.	F 90	CONVEYING AND CONVEYORS	
To house 20,000 head of cattle	468 516	Walters, James O. Curtis, A. H. Jensen . To house 20,000 head of cattle	310 516	Computer simulation of hydraulic and pneumatic conveying of uniform and	
An irrigation problem in a citrus grove The mobile viner header: pros and	518	CAREER GUIDANCE		mixed-size particles in vertical pipes (Norman Smith, James R, O'Callaghan)7	732
cons (James G. Storms)	595	Wanted: more women engineers in ag-			132
(Ken Herold, Walker Miller)	651	ricultural engineering (E. Paul Taiga- nides)	83	CORN World research needs for increasing	
A high performance a-c electric drive for vehicles (Ernest H. Wakefield)	697	CHECK POINTS		corn production (G. F. Sprague) Corn kernel crackage induced by me-	71
For pollution studies: an automatic liquid sampler (J. W. D. Robbins, G. J. Kriz)	708	A unique work-experience opportunity (residents in engineering practice) — Three national meetings in fiscal '70-	0.5	chanical shelling (Glenn E. Hall and William H. Johnson)	51
AGRICULTURAL ENGINEERING		'71 Funds for geographic units – Trends	96	horny endosperm as a function of time, temperature and moisture con-	
Wanted: more women engineers in agricultural engineering (E. Paul Tai-		in engineering teachers' salaries – AE curricula for the 70's proceedings		tent (J. R. Hammerle, N. N. Mohsenin)T Effects of thermal exposure on the fol-	372
ganides)	83	available	146 316	iage of young corn and soybean plants	634
DeForest) Agricultural engineering – and the fu-	186	Awards and honors		(William F. Lalor, Wesley F. Buchele) .T Method of predicting thermal proper-	
ture food supply (Carl W. Hall)	195	tions) - Congratulatory messages (ded-	270	ties of frozen sucrose-corn syrup solids solutions (F. E. Bard, R. A. Kep-	
Agricultural engineering abroad (Law- rence H. Skromme)	220	A volunteer ASAE clipping service –	379		554
Agricultural engineers versus agricul- tural workers (David C. Lewis and		Earn someone's gratitude	480	CORN MECHANIZATION Beefmaker II: developing a total corn	
Douglas W. Williams)	347	list – Thanks for visiting ASAE head- quarters – Committees to meet at		harvester (Thomas E. Hitzhusen, Ste- phan J. Marley, Wesley F. Buchele)	632
nich) A crisis for agricultural engineering	512	ASAE — Final report on building fund activities	658		032
George C. Beakley, Jr.)	638	The demise of two engineering publi- cations – Reminder: pay dues prompt-	000	COTTON A planter for precision depth and	
AIR FLOW THROUGH PRODUCTS		ly and save - Are women treated as	711	placement of cottonseed (Elmer B. Hudspeth, Jr., Donald F. Wanjura)T	153
Relationships between aerosol disper- sion and air turbulence in a food		lepers in engineering?	711	Instrumentation and temperature con- trol of guarded hot-plate system for	
packaging area (D. R. Heldman)T	14	COMBINES Aerodynamic separation in a combine		measuring thermal properties of seed	
AIRCRAFT Pesticide drift from aerial and ground		shoe (D. W. Rumble, J. H. A. Lee) T Dynamic analysis of automatic control	6	cotton (Leonard L. Bashford, James A. Ferguson)T	155
applications (K. R. Frost, G. W. Ware) .	460	of combine header height (G. E. Reh-	225	Physical factors affecting oxygen stress of germinating cotton seeds (C. G. Coble, H. D. Bowen)T	
AMERICAN SOCIETY OF AGRICULTURAL		The mobile viner header: pros and	595	Effect of direct current glow discharge	162
ENGINEERS The growth of ASAE and the farm		cons (James G. Storms) Laboratory testing of rice combines		on germination of cottonseed (J. L. Goodenough, R. B. Stone, J. J. McDow)T	354
equipment industry 1907-1970 ASAE: that agricultural engineers may	181	(Allan E. Neal, Geoffrey F. Cooper)T	824	Effects of soil temperature on emer-	
communicate	226 231	COMPUTERS Connecting a gas chromatograph to an		gence and development of cotton (L. H. Wilkes, B. J. Cochran, G. A. Niles) .T	511
1970: beginning a new era for ASAE The fund-raising campaign	233 236	analog computer (Rollin D. Strohman,	76	Design of a spinning disc, droplet sep- arator and the determination of the	
ASAE headquarters	239	Larry F. Huggins, C. Gene Haugh) Data acquisition in environmental re-	70	size and density of droplets deposited on cotton foliage (David B. Smith, Eddie C. Burt, F. J. Benci)T	
Planning ASAE national headquarters . Dedication of ASAE headquarters	241	search (LeRoy Hahn, W. D. Clark, Theodore E. Bond)	137	Kinetic friction of cotton seeds as af-	664
One cloth to be worn intact	367 368	Teleprocessing equipment in dam design (Jerry R. Wehrspann)	309	fected by several factors (Rex L. Clark, G. B. Welch, W. R. Fox)T	708
Dedication greetings from the local community (C. O. Zollar)	368	Use of digital computer for efficient drying of high-moisture, cereal-grain dough (D. M. Farmer, F. W. Bakker-		Correlation of mechanical harvesting with cotton plant characteristics (Tom	
Dedication greetings from the engineering family (W. J. Harris)	368	dough (D. M. Farmer, F. W. Bakker- Arkema)	61	E. Corley)T	768
Dedication greetings from the agricul- tural family (S. W. White)	369	Simulation of a time-shared automa- tically controlled c-a apple storage		DAIRY FARM STRUCTURES	
The new headquarters facility (B. A.	371	tically controlled c-a apple storage (John E. Manson, Robert J. Novak, John W. Zahradnik)	472	Experimental circular dairy barn (Mark E. Singley, William J. Roberts, David	
Jones, Jr.) To honor agricultural engineers (med-	482	Designing poultry house ventilation systems (Floyd N. Reece, C. W. Bou-	476	R. Mears)	78
alists)	402	chillon, J. W. Deaton)	523	DEHYDRATION Approximate solution for rate of sub-	
ANIMAL GROWTH Measurement of hypothalamic tem-		Simulating flood routing through a reservoir (M. Y. Hamdy, R. B. Curry)	654	limation-dehydration of foods (S. H. Cho, J. E. Sunderland)T	550
perature and heart rate of poultry (Nor- man R. Scott, Arthur T. Johnson, A		tion of enray dronlets (M. Ray Smith) T	587		333
Mathematical modeling of thermal	342	Computer methods in silencer design (B. K. Huang, Y. R. Chen)T	597	DRAINAGE Evapotranspiration and drainage from	
homeostasis in a chicken (Charles W. Bouchillon, Floyd N. Reece, J. W. Dea-		Computer simulation of hydraulic and pneumatic conveying of uniform and		the root zone of irrigated coastal ber- mudagrass (Cynodon Dactylon L. Pers.)	
ton)T	648	mixed-size particles in vertical pipes		on coastal plains soils (Basil D. Doss, Howard M. Taylor)	426
AQUACULTURE The national sea grant program (Rob-		han)	732	Howard M. Taylor)T Hydraulic conductivity sampling for confidence (A. S. Dylla, J. C. Guitjens)T	485
bert D. Wildman)	410	design and planning - agricultural	025	Ditch drainage of anisotropic nonho-	
ASPHALT		systems introduction (Robert M. Peart)T Survey of simulation techniques and	033	mogeneous porous media: a model study (E. W. Rochester, Jr. and G. J.	626
Protective spray coatings for water harvesting catchments (Gary W. Fras-		applications to agricultural problems (David A. Link, William E. Splinter) T	837	Kriz)T A model study of drain envelopes in a coarse-silt base material (Walter D.	020
ier, Lloyd E. Myers)T	292	Network analysis in agricultural sys- tems engineering (Robert M. Peart,		Lembke, D. A. Bucks)T	
BEEF Influence of space on performance of		Kenneth Von Bargen, Douglas L. Dea- son)	849	Land grading for improved surface drainage (John I. Sewell)T	817
feedlot cattle (S. R. Morrison, V. E.	145	Linear and nonlinear applications of mathematical programming (J. B. Holt-		DRYING, GENERAL	
To house 20,000 head of cattle	516	man)T	854	DRYING, GENERAL Velocity divergence of hot gases as affected by water-vapor release (I. F.	
BIOENGINEERING What is biological engineering? (Rob-		CONCRETE An inherent bond between concrete		fected by water-vapor release (L. F. Whitney, Yoram Ben-Ur)	107
	691	and plastics (Gopal Singh, J. T. Clay-	ECO	W. F. Millier, N. R. Scott)T Tensile relaxation modulus of corn	232
BUILDING COMPONENTS AND MATERIAL	S	ton)	562	horny endosperm as a function of time, temperature and moisture con-	
An inherent bond between concrete and plastics (Gopal Singh, J. T. Clay-		CONSERVATION Economics in soil and water conser-		tent (J. R. Hammerle, N. N. Mohsenin)T	372
Collapse loads of wooden columns	562	vation (John F. Timmons) For the benefit of man (Norval H.	364	Drying farmer's stock peanuts at 40 and 60 F (J. D. Woodward, R. S. Hutch-	
with various eccentricities and end		Curry)	455	ison, J. I. Davidson, Jr.)T	444

UM

Moisture sorption of burley tobacco (Linus R. Walton, Wiley H. Henson, Jr.)	Computer-assisted instruction in agri- cultural engineering design (M. Ray Smith)	Effect of water-table levels on evapo- transpiration and crop yield (R. E. Williamson, John R. Carreker)T 16	8
Jr) T 4 Specific heat of Spanish peanuts (M. E. Wright, J. G. Porterfield) T 5 An analytical and experimental study	The need for technological literacy	Evapotranspiration and drainage from the root zone of irrigated coastal ber- mudagrass (Cynodon Dactylon L. Pers.)	
of radiant heating of rice grain (Satish Bal, Finis T. Wratten, Jerry L. Ches- ness, Macon D. Faulkner)	ELECTRIC HEATING AND EQUIPMENT A simplified engineering design equation for a thermoelectric heating-cool-	on coastal plains soils (Basil D. Doss, Howard M. Taylor) 42	6
Applications of systems techniques to design and planning – agricultural systems engineering introduction (Rob-	ing device (George R. Mowry)T 19: ELECTRICITY, ELECTRIFICATION,	(H. N. Stapleton)	C
ert M. Peart)	35 ELECTRIC POWER An experimental solid state differen-	The hidden migration (Wesley J. Hennessy)	6
DUST Electrostatic field breakdown pheno-	Leon F. Charity) 80 Electric potentials and domestic wa-	FEED AND FEEDING	E
mena in applying charged particles (Byron K. Webb, Henry D. Bowen) T 4	insects	Measuring a dairy cow's feed elec- tronically (George H. Fathauer) 8	2
EDITORIALS Today's engineering graduate (Hcward L. Wakeland)	Optimizing control systems for elec- trified vehicles (Walter Slabiak) 69 A high performance a-c electric drive	er design in pneumatic conveying of chopped forage (R. R. Wolfe, M. M. Smetana, G. W. Krutz	2
The subtle pollutants (Edward Llewel-	for vehicles (Ernest H. Wakefield) 69 71 An electrochemical function genera- tor for low frequencies (Leo H. Soder-	Modeling feedior runoff pollution I. analog simulation	9
Iyn Thomas)	27 holm, Leon F. Charity)	Erickson)	
logson)	77 Women in engineering professions (Rosmarie von Rumker)	dry-fertilizer applicators (W. B. Reed.	
An analysis of animal environmental research needs (Robert E. Stewart) 4	47 ENVIRONMENT, ANIMAL Data acquisition in environmental re- search (LeRoy Hahn, W. D. Clark,	Movement of agricultural fertilizers	100
For the benefit of man (Norval H. Curry) 4 The need for technological literacy	Theodore E. Bond)	Lentz, Robert P. Beasley)	(m)
(David C. Miller) 5 Women in engineering professions	DeShazer, K. A. Jordan, C. W. Suggs). T 87 An analysis of animal environmental research needs (Robert E. Stewart) 403	diction of the plasticity theory to pre-	0
chemicals create a hungry harvest?	Temperature telemetry from swine (David S. Kato, Warren L. Roller, Howard S. Teague)		
ert M. Artnur) 6	91 dairy cattle based on expected pro- duction losses (LeRoy Hahn, D. D.	ris)	€
EDUCATION AND REGISTRATION Today's engineering graduate (Howard L. Wakeland)	Air-flow characteristics of a scale mod-	reservoir (M V Hamdy R R Curry) 65	4
(James H. Lillard)	15 el chamber (S. A. Weller, D. R. Held- man, M. L. Esmay)	areas of north-central lowa (D. W. De- Boer, W. F. Ritter)	7
Anticipated opportunities and limitations for agricultural engineering education Gerald W. IsaacsUE	6 in controlled environment broiler	Use of digital computer for efficient	
J. T. Clayton UE L. L. Boyd UE Ernest T. Smerdon UE How will undergraduate engineering	11 chambers (Mylo A. Hellickson, Alfred 15 D. Longhouse, R. A. Peterson) T 62: 18 Mathematical modeling of thermal ho- meostasis in a chicken (Charles W.	Relationships between aerosol disper-	1
change? (H. L. Wakeland)UE: Changes in students in the 1970's (D. L. Moe)UE:	Deaton)T 64	sion and air turbulence in a food pack- aging area (D. R. Heldman)	4
The role of small undergraduate departments in a multiversity (Roy M. Kottman)	(D. O. Baxter, Thomas E. Maddox, Her- schel V. Shirley)	Thermal properties of frozen sucrose solutions (R. A. Keppeler, J. R. Boose) .T 33 A generalized theory of sorption phe-	
The role of the next generation of agricultural engineers in public service research (G. E. Vanden Berg)UE	gilts (George W. A. Mahoney, I. T. Om-	I, the isotherm equation) (P. O. Ngod-	
The role of the next generation of agri- cultural engineers in the farm equip- ment industry – professional and in-	ENVIRONMENT, PLANT This rotating phytotron follows the sun	Holding-time measurement in an ul- trahigh-temperature, direct-steam-in- jection system (E. R. Edgerton, Victor A. Jones)	
dustrial challenges (R. C. Evans)UE of the role of the next generation of agricultural engineers in food production	(L. W. Neubauer, S. M. Henderson, F. P. Zscheile)	A. Jones)T 69 FORAGE	W3
and processing (Carl W. Hall)UE! Curriculum requirements for agricul-	54 grams (L. O. Pochop, M. D. Shanklin). T 13: Maintaining one hundred percent rel- ative humidity in an alternating-tem-		
Bellinger)UE The animal-environment interface (Robert E. Stewart)UE	perature seed germination chamber (Charles N. Hinkle, Charles K. Spillman, Lester C. Shenberger) 19	chopped forage (R. R. Wolfe, M. M. Smetana, G. W. Krutz) Comparative drying rates of selected forage crops (Nat K. Person, Jr., J. W.	2
tural engineering - soil-plant machine interactions (W. E. Splinter)UE	tween the atmosphere and the plant (James L. Wright and Edgar Lemon) T 238	Methods of accelerating forage drying (David R. Mears, William J. Roberts) T 53	4
Building engineering courses upon a biological background (Loren D. Jensen)UE Developing technical competence re-	Theoretical aspects of CO ₂ enrichment (J. E. Pallas, Jr.)	Effect of mechanical forage-harvesting devices on field-curing rates and relative harvesting losses (Gordon P. Barrington, H. D. Bruhn) 7 87	4
animal production (D. W. Mangold	Rilly I Rarfield) T 24		-
T. E. Hazen) Developing technical competence regarding engineering aspects of field machinery (Henry D. Bowen) UE:	production (Sylvan H. Wittwer)T 249 CO ₂ enrichment for vegetable production (Dale W. Kretchman, Freeman S.	P. Tully)FE	6
garding the engineering aspects of	CO ₂ enrichment for flower production (W. D. Holley) T 250	Prepared discussion of the papers on	0
terials (Nuri N. Monsenin)	The control and effects of supplemen- tal carbon dioxide in air-supported plastic greenhouses (C. Alan Pettibone,	Prepared discussion of the papers on forestry and engineering core position	
Developing the professional man in four years (Frank B. Lanham) UE 1: Undergraduate teaching techniques and innovations used for professional	plastic greenhouses (C. Alan Pettibone, Walter R. Matson, C. L. Pfeiffer, W. C. Ackley)	(Conor W Boyd) FF 1	
courses (D. M. Edwards)UE 1:	Ackley) Ackley) CO, systems for growing plants (William A. Bailey, Herschel H. Klueter, Donald T. Krizek, Neil W. Stuart) Design and performance of sunlit cli-		1
design courses (J. B. Liljedahl) UE 1: The use of active involvement sheets in agricultural engineering courses	22 mate chambers (Glenn J. Hoffman, Stephen L. Rawlins)	ing (Murray W. Hattin)FE 2 Prepared discussion of papers on for- estry training for engineers in manu-	8
A creative engineering design course at the freshman level (Edward A.	The trajectory of an evaporating wa- ter droplet falling in an airstream (L.	facturing (Donald Baker)	
Hiler)UE 1	28 R. Walton, J. N. Walker) T 158	facturing (H. D. Sexton)FE 3	é

Prepared discussion of papers on for-	Design and performance of an experi-	A. R. Edison, S. O. Nelson, L. E. Stet-
estry training for engineers in manu- facturing (Curt Graversen)FE 3	mental citrus fruit pick-up machine (Dale E. Marshall, Scott L. Hedden) T 406	son)T Effects of sonic irradiation on drying
Forest engineering in the pulp and pa-	Countercurrent grape sugar extraction	rates of wheat and shelled corn (C.
per industry (James A. Holekamp) FE 3 APA forest engineering viewpoint (W.	Weight-volume relationships of tart	C. Huxsoll, C. W. Hall)T Determining oat grain moisture con-
S. Bromley)	and sweet cherries (Jordan H. Levin, Bernard R. Tennes, R. T. Whittenber-	tent by neutron scattering (S. M. Mir-
U. S. Forest Service requirements (Myles R. Howlett)FE 4	Bernard R. Tennes, R. T. Whittenberger, Burton F. Cargill)	anda, G. Levine)T Potential energy use in low-tempera-
A look at forest engineering in private	Development of an auger nicking head	ture grain conditioning (Gene C.
forestry (H. D. Burkhalter)FE 5	for selectively harvesting fresh market oranges (D. H. Lenker)	Shove)T Analysis and hybrid simulation of
Prepared discussion of public and pri- vate forest engineering needs (W. W.	Mechanical harvester for fresh market	deep-bed drying of grain (M. Y. Ham-
King)FE 5 Prepared discussion of public and pri-	onions (Wayne LePori, Price Hobgood)T 517	dy, H. J. Barre)T 7 Equilibrium moisture content of small
vate forest engineering needs (Ross	Detachment characteristics of desert- grown oranges and grapefruit (James	grain - hysteresis (S. Milton Hender-
A. Phillips)FE 5	W. Rumsey, Kenneth K. Barnes) T 528	son) T 7
Prepared discussion of public engi-	grown oranges and grapefruit (James W. Rumsey, Kenneth K. Barnes) T 528 A machine for separating cherries without stems from those with attached stems (Bernard R. Tennes, Jordan H. Jeuis Chernes M. Hennes, Jordan H. Jeuis Chernes M. Hennes Jeuis Chernes M. Hennes Jeuis M. He	GREENHOUSES, PLANT ENVIRONMENT
neering research laboratory needs (Arne K. Kemp)FE 5	tached stems (Bernard R. Tennes, Jor-	Predicting effects of CO2 enrichment
		with simulation models and a digital computer (William G. Duncan, Billy
Forest engineering - post baccalaure-	precision planting (Bill L. Harriott) T 550	J. Barfield)
ate (E. L. Ellwood, T. E. Maki)FE 6	Performance of an oscillating, forced- air concept for removing citrus fruits	The control and effects of supplemen- tal carbon dioxide in air-supported
(A. M. Leppert, W. H. Bussell, G. R.	(Jodie D. Whitney)	plactic greenhouses (C. Alan Petti-
Fe state of the st	A technique for evaluating fruit and vegetable abrasion resistence (James_	bone, Walter R. Matson, C. L. Pfeiffer, W. B. Ackley)
Prepared discussion on student needs and trends (R. L. Maddex)FE 6		CO ₂ systems for growing plants (William A. Bailey, Herschel H. Klueter,
Prepared discussion on forest engi-	Detachment of tomato fruit from vines as influenced by fruit maturity and	Donald T. Krizek, Neil W. Stuart) T 20
neering students needs (Charles E. Rice)FE 7	plant desiccation (Richard C. Fluck) .T 704	Design and performance of sunlit cli-
Formal brief: academic programs for	Development of mechanical harvest-	mate chambers (Glenn J. Hoffman,
forest engineering (William R. Fox)FE 7 Formal brief: forest industry needs	ing and grading equipment for straw- berries (Glenn S. Nelson, Ahmed A.	Stephen L. Rawlins)
both engineers and foresters (R. Rod-	Kattan) 743	terials (John N. Walker, Donald C.
ney Foil)FE 7 Summarization comments on the ASAE	Mechanical means of harvesting ber- ries (Pictiaw Chen, Michael O'Brien,	Slack) T 6
Forest Engineering Conference on Ed-	ries (Pictiaw Chen, Michael O'Brien, Frank Winter, S. J. Leonard)T 795	soil mixes in greenhouse benches (R.
Forest Engineering Conference on Education (Boone Richardson)FE 7	Firmness and pitter loss studies of	A. Aldrich, W. H. Berning)T 69
Summarization comments on the ASAE Forest Engineering Conference	tart cherries (Bernie R. Tennes, Rob- ert C. Diener, Jordan H. Levin, R. T. Whittenberger)	HAY CURING AND DRYING
on Education (J. David Long)FE	Whittenberger)T 810 Use of gamma ray transmission in se-	Storing wafered hay (John B. Dobie,
Summarization comments on the ASAE Forest Engineering Conference on Education (Kent A. McDonald)FE 7	lecting lettuce for harvest (Roger E.	Robert G. Curley)
on Education (Kent A. McDonald)FE 7	lecting lettuce for harvest (Roger E. Garrett, Wilson K. Talley)	and animal consumption (Mark A.
	harvesting and handling of fruits and	Stahmann)
FOREST MECHANIZATION Developing the JD540 (J. W. Jewett,	vegetables (Michael O'Brien, Robert	Alfalfa products by wet fractionation (R. R. Spencer, E. M. Bickoff, G. O. Kohler, S. C. Witt, B. E. Knuckles, A.
A. S. Smemo) 1	B. Fridley)T 870 Effect of proportional, nonproportional	C. Mottola)T 19
Direct seeding and the third forest (Harvey D. Burkhalter) 69	and nonlinear damping on dynamic	Drying the alfalfa stem (L. O. Bagnall,
The need for uniform standards for	lames P. Hutchinson, Pohert R. Frid.	W. F. Millier, N. R. Scott)
forest equipment (Norris C. Olsen) 70 Effects of articulated steering on trac-	ley) 8/9	Effect of partially field curing on en- ergy requirements for processing and
tive performance of a rubber-tired logging tractor (Boone Y. Richardson,	Dielectric theory and bioelectrical	pelleting coastal bermudagrass (James
logging tractor (Boone Y. Richardson, Arthur W. Cooper)	measurements (part I. theoretical) (David R. Thompson, Gerald L. Zach-	L. Butler, Robert E. Hellwig) 3: Comparative drying rates of selected
Artifur W. Cooper)	ariah) T 891	forage crops (Nat K. Person, Jr., J.
FREEZING, FOOD	Analysis of stress during impact of fruit considered to be viscoelastic	W. Sorenson, Jr.) T 3! Methods of accelerating forage drying
Thermal properties of frozen sucrose solutions (R. A. Keppeler, J. R. Boose) .T 33		(David R. Mears, William J. Roberts) T 53
Method of predicting thermal proper-		Cross-sectional area measurement of alfalfa stems (Glenn E. Hall, Ross D.
ties of frozen sucrose-corn syrup sol- ids solutions (F. E. Bard, R. A. Kep-	FRUIT AND VEGETABLE STORAGE Mechanical resonance within red deli-	Brazee, Carl W. Hall) 57
peler)T 55	cious apples and its relation to fruit	Altering physical characteristics of al-
EDOCT PROTECTION	texture (Essex E. Finney, Jr.)T 177 Analog simulation of a time-shared,	falfa to increase the drying rate (Edward H. Priepke, H. D. Bruhn) 82
FROST PROTECTION Physical properties of foam for pro-	automatically controlled CA apple stor-	Effect of mechanical forage-harvesting devices on field-curing rates and rela-
tecting plants against cold weather	age (John E. Manson, Robert J. Novak, John W. Zahradnik) T 574	tive harvesting losses (Gordon P. Bar-
(Harry J. Braud, Jerry L. Chesness)T	John W. Zumadiny	rington and H. D. Bruhn) 87
Foam protects strawberries during freeze (Jerry L. Chesness, Harry J. Braud, P. L. Hawthorne)	GERMINATION	HAYMAKING MACHINERY
Braud, P. L. Hawthorne) 80 Sprinkling to reduce heat stressing of	Maintaining one hundred percent rela- tive humidity in an alternating-tem-	Developing a roll wafering machine:
strawberry plants (Jerry L. Chesness,	perature seed germination chamber	a progress report (Richard W. Bush- meyer, David E. Krause, Carl J. Rath) . 40
Harry J. Braud) 14	(Charles N. Hinkle, Charles K. Spill- man, Lester C. Shenberger)	Determining specific gravity of alfalfa solids by nonlinear least-squares meth-
FRUIT AND VEGETABLE HARVESTING	Effect of direct current glow discharge	od (Elgin B. Hundtoft, S. M. Wu) 18
AND HANDLING	on germination of cottonseed (J. L. Goodenough, R. B. Stone, J. J. McDow)T 354	
Sprinklers and vegetable crop mech- anization in desert areas (Hunter John-	. Effects of soil temperature on emer-	Determining convective heat transfer
son, Jr., Albert W. Marsh, G. Neil Mc- Rae, Phillip G. Mowbray)	gence and development of cotton (L. H. Wilkes, B. J. Cochran, G. A. Niles) .T 511	coefficients from ellipsoidal shapes (B. L. Clary, G. L. Nelson)
To predict precooling rates for toma-		A mathematical model of heat transfer
To predict precooling rates for tomatoes (Jaw-Kai Wang, Pie-yi Wang)	GRAIN AND SEED HARVESTING AND MECHANIZATION	in a pig (Frederick E. Beckett, Clyde_
vester (Don R. Gradwohl) 139	Remote measurement of concentration	Vidrine) T 45 Respiratory fraction of total insensible
Using an x-ray image scan to sort	and height of heads of standing grain	heat loss from shorn and unshorn sheep (W. H. Brown, M. D. Shanklin) .T 50
Using an x-ray image scan to sort bruised apples (R. G. Diener, J. P. Mitchell, M. L. Rhoten)	with microwave energy (A. G. Story, W. H. Johnson, R. E. Stewart)	Heat transfer in nucleate boiling of
Mechanisms, culture, and varieties for selective mechanical cantaloupe harvest (B. L. Harriott, R. E. Foster, II,	Internal damage of wheat analyzed	sorghum syrup (C. A. Flood, Jr., Ger-
selective mechanical cantaloupe har-	by radiographical examination (Do Sup Chung, Harry H. Converse)	ald M. White) T 59
J. H. Park) 48		HEATING AND HEATERS
Investigation of some aerodynamic properties of lowbush blueberries	GRAIN BIN AND STORAGE Behavior under high pressure of wheat	A simplified engineering design equa- tion for a thermoelectric heating-cool-
(Hayden M. Soule, Jr.) 1114	Behavior under high pressure of wheat grains in bulk (C. V. Narayan, Walter K. Bilanski)	ing device (George R. Mowry)T 19
A systems approach to optimizing pa-	K. Bilanski)T 298 Determining dielectric properties of	HITCHES AND HITCHING
paya fruit-package weight control (Tung Liang) 133	grain and seed in the audiofrequency	Providing depth control for integral
Formulation of forced vibrations of tree limbs with secondary branches	range (Paul T. Corcoran, Stuart O. Nelson, Laverne E. Stetson, Carl W. Sch-	flexible implements (Richard W. Hook,
(A. L. Phillips, J. R. Hutchinson, R. B.	laphoff) 348	Kenneth E. Murphy) 56
Fridley) T 138	A method for determining dielectric	HOGS, HOG HOUSES, HOG SYSTEMS
Is mechanically harvesting pineapple practical? (Michael O'Brien, William	properties of grain and seed in the 200- to 500-MHz range (Laverne E. Stetson, Stuart O. Nelson)	Slotted wood floors for swine (C. S. Walters, James O. Curtis, A. H. Jensen) 31
H. Kahl, Lee Moffett) 564	Stetson, Stuart O. Nelson) T 491	Temperature telemetry from swine
The mobile viner header: pros and cons (James G. Storms) 595	GRAIN, EAR CORN AND SEED DRYING	(David S. Kato, Warren L. Roller, Ho- ward S. Teague)
Mechanical properties of papaya and	A bridge method for dielectric meas-	ward S. Teague)
their dependence on maturity (Jaw- Kai Wang, Hang-sun Chang)	urements of grain and seed in the 50- to 250-MHz range (J. L. Jorgensen,	studies (Theodore E. Bond, R. L. Giv- ens, Stanton R. Morrison)

Anaerobic decomposition of swine ex- crement (O. E. Cross, Alvaro Duran) T A mathematical model of heat transfer	320	To economically water citrus trees (Ken Herold, Walker Miller) 65 Electric controls for automatic surface	at operator's site (D. W. Ryland, P. K.	
in a pig (Frederick E. Beckett, Clyde Vidrine)T Effects of housing and protein levels	450	irrigation systems with reuse system (Paul E. Fischbach, Thomas L. Thompson, Laverne E. Stetson)	Computer methods in silencer design	
on winter growing and finishing of swine (C. O. Cramer, R. H. Grummer, G. R. Barr)		Moisture sensor placement for regula- tion of furrow-irrigation systems (R	ONIONS	
gilts (George W. A. Mahoney, I. T. Om-	520	Automation of surface irrigation with fluidic diverters (E. G. Kruse, P. A.	onions (Wayne LePori, Price Hobgood).T 5	17
tvedt, R. L. Edwards, D. F. Stephens, E. J. Turman)	832	Freeman, H. R. Haise)	7 PATENTS The patent system - source of information for the engineer (Joseph K.	
HUMAN FACTORS Small tractor operator position and safety behavior (L. W. Knapp, Jr., J. T. Parks)	456	Evapotranspiration and drainage from the root zone of irrigated coastal bermudagrass (Cynodon Dactylon L. Pers.) on coastal plains soils (Basil D. Doss, Howard M. Taylor)		152
HYDRAULICS, MACHINERY Fluidic control of hydrostatic tractor		sprinkler irrigation system (D. C. Kin-	Lynd, M. E. Mason)T	93
transmissions (J. W. Howard, Stanley J. Clark, R. O. Turnquist)	72	Systems approach to design of sprink- ler irrigation (T. Liang, I. P. Wu) T 61 Unlined mole lines for irrigation (D.	Specific heat of Spanish peanuts	44
flexible implements (Richard W. Hook, Kenneth E. Murphy) Vehicle-design concept to fully utilize	560	I. Norum, Don M. Gray)T 66 The hydraulics of an automated fur- row irrigation system with rectangular	1 (M. E. Wright, J. G. Porterfield) 50 PELLETING	DE
the potential of hydrostatic drives (W. E. Larsen, D. R. Hunt, R. R. Yoerger) .T Developing an automatic steering sys-		side weir outlets (John M. Sweeten, James E. Garton)	Effect of partially field curing on en- ergy requirements for processing and	
tem for a hydrostatic vehicle (R. L. Parish, C. E. Goering)T	523	measuring infiltration in furrow irriga-	pelleting coastal bermudagrass (James L. Butler, Robert E. Hellwig)	15
HYDROLOGY An inexpensive countertimer for water velocity meters (H. D. Fisher, J. A. Bondurant)	600	bert) T 79 Predicting irrigations from climatic data and soil parameters (Carl E. Franzoy, E. L. Tankersley) T 81 Land grading for improved surface	Use of stain method in determining the drop-size distributions of coarse	33
INFILTRATION OF WATER A portable infiltrometer (W. F. Rogers)	460	Land grading for improved surface drainage (John I. Sewell) T 81 Control of soil moisture during sprinkler irrigation (Jack Keller) T 88	Monke)T	56
Model theory for predicting process of leaching (J. F. Alfaro, Jack Keller) .T	362	LAND GRADING AND LEVELING	sects (G. A. Kranzler)	51
Model theory for predicting process of leaching (J. F. Alfaro, Jack Keller) .T A study of two-dimensional infiltration (Yu-Si Fok) T A modified inflow-outflow method of	676	Field comparison of land smoothers (Nathan Buras, Gedaliahu Manor) T 63 Land grading for improved surface	optic tract of the tobacco hornworm moth (John S. Smith, Jr., James M. Stanley, Unus F. Earp, S. D. Carlson).T 21	14
measuring infiltration in furrow irrigation (Luke a Nance, Jr., Jerry R. Lambert)		Land grading for improved surface drainage (John I. Sewell)	Pesticide drift from aerial and ground applications (K. R. Frost, G. W. Ware). 46 Instant electrocution for night-flying	
INSTRUMENT NEWS		Small tractor operator position and safety behavior (L. W. Knapp, Jr., J. T.	insects 46 Can additional controls on agricultural	68
Photomicrometric measurements of dimensions (W. F. McClure, C. J. Wy- song, J. R. Hammerle, F. S. Wright)	26	Parks)	(Marianna Pratt)	31
An experimental solid state differential thermostat (Leo H. Soderholm, Leon F. Charity)	86	Power weight transfer systems for towed implements (Kenneth E. Mur- phy, Martin C. Borchelt, M. P. Gass-		23
A practical platform for infrared aerial photograph (R. D. Watson, Walter L. Moden, Jr., R. N. McGraw)	526	man)	and organic insecticides in surface runoff (Dennis M. Sievers, Gary L. Lentz, Robert P. Beasley)	20
An inexpensive countertimer for water velocity meters (H. D. Fisher, J. A.		progress report (Richard W. Bushmeyer, David E. Krause, Carl J. Rath) 40 Providing depth control for integral		
Bondurant) Temperature telemetry from swine (David S. Kato, Warren L. Roller, Ho-	600	flexible implements (Richard W. Hook, Kenneth E. Murphy)	ena in applying charged particles (Byron K. Webb, Henry D. Bowen) T 45 Distribution analysis of two granular pesticide applications (Gerald A. Stangl,	
ward S. Teague)	652	The design of sweet potato machinery (James R. Hammerle)	Paul K. Turnquist)	15
Photomicrometric measurements of di- mensions (W. F. McClure, C. J. Wy- song, J. R. Hammerle, F. S. Wright)	0.0	Farm machinery maintenance – a re- newal process model for predicting	ris, J. M. Marchello, R. M. Coan) 79	99
Instrumentation and temperature con- trol of guarded hot-plate system for	26	inventory demand (Tung Liang, David A. Link)	PHOTOGRAPHY A practical platform for infrared aerial photography (R. D. Watson, Walter L. Moden, Jr., R. N. McGraw)	
measuring thermal properties of seed cotton (Leonard L. Bashford, James A. Ferguson)	155	ery efficiency and capacity (E. S. Renoll)	Woden, Jr., R. N. WcGraw) 52	26
A portable infiltrometer (W. F. Rogers) A practical platform for infrared aerial photography (R. D. Watson, Walter L.	469	machinery systems through response surface methodology (I. W. Kirk, R. M.	High-speed photography as a tool for	.7
Moden, Jr., R. N. McGraw) An inexpensive countertimer for water	526	Patterson) T 51 Application of mathematical formulas to repair cost data (Wendell Bowers,		11
velocity meters (H. D. Fisher, J. A. Bondurant)	600	Donnell R. Hunt)	A planter for precision depth and	
(David S. Kato, Warren L. Roller, Howard S. Teague)	652	MECHANIZATION	placement of cottonseed (Elmer B. Hudspeth, Jr., Donald F. Wanjura)T 15 To plant vegetables with seed wafers	3
IRRIGATION Sprinklers and vegetable crop mech-		The mechanization of agriculture in Pakistan (S. M. Najmal Haque) 14 Mechanizing the tropical farm (Amir	Kratky) 56	56
anization in desert areas (Hunter Johnson, Jr., Albert W. Marsh, G. Neil McRae, Phillip G. Mowbray)	20	U. Khan)	(Harvey D. Burkhalter) 69 A packaged environment system for	
Pushbutton control for water systems management (L. D. Wilder, Charles D. Busch)	408	Metrication: a must? (Kenneth L. Magee)	precision planting (Bill L. Harriott) T 55 The development of a planetary-vacuum seed metering device (Ted H.	50
Sprinkling to reduce heat stressing of strawberry plants (Jerry L. Chesness, Harry J. Braud)	140	MILK Thermal conductivity of dry milk in a	Short, Samuel G. Huber) 80)3
arid and desert conditions of high wa-	140	packed bed (A. W. Farrall, A. C. Chen, P. Y. Wang, A. M. Dhanak)	POLLUTION The subtle pollutants (Edward Liewellyn Thomas)	27
ter and soil salinity (D. Goldberg and M. Shmueli)T Sprinkler intensity and soil tilth (Jack	38	rate of cooling of homogenized milk in various containers (John L. Blaisdell, W. J. Harper)	of engineering for the 70's (G. B.	77
Sprinkler intensity and soil tilth (Jack Keller) T Efficient border irrigation design and operation (O. W. Howe, D. F. Heer-	118	Physical properties of nonfat dry milk as influenced by spray drying condi- tions (Hiromichi Hayashi, Dennis R.	Agricultural chemicals and our water resources (Edwin J. Monke) 35	
mann)	126	Heldman, T. I. Hedrick) 72	Water quality - a concern for agricul-	
Modifying an arid microclimate with	143	NOISE Measuring tractor noise at the Nebras- ka Tractor Testing Laboratory (G. W.	Agriculture and man's environment	
sprinklers (Frank E. Robinson) An irrigation problem in a citrus grove	465 518	ka Tractor Testing Laboratory (G. W. Steinbruegge, Gary L. Schmer, Ned H. Meier)	Urbanization and the livestock indus-	

The agricultural engineer's role in en- vironmental control (Albert F. Klinge).	360	Mechanical resonance within red de- licious apples and its relation to fruit		Surface runoff from graded lands of low slopes (J. M. Laflen, I. L. Save-	
For the benefit of man (Norval H. Curry)	455	texture (Essex E. Finney, Jr.)T Determining specific gravity of alfalfa	177	The inference of intake and hydrau-	T 340
The case of the misguided number or "you don't say" (Conrad B. Gilbertson) Legal restraints on agricultural pollu-	511	solids by nonlinear least-squares meth- od (Elgin B. Hundtoft, S. M. Wu)T	181	lic roughness parameters from plot runoff using kinematic wave theory (R. D. Burman, R. D. Black)	
Legal restraints on agricultural pollu- tion (William R. Walker)	636	od (Elgín B. Hundtoft, S. M. Wu)T Determining convective heat transfer coefficients from ellipsoidal shapes		(R. D. Burman, R. D. Black)	T 479
For pollution studies: an automatic liquid sampler (J. W. D. Robbins, G. J.		coefficients from ellipsoidal shapes (B. L. Clary, G. L. Nelson)T Physical properties of eggshell (J. R.	309	varied flow on velocity distribution coefficients (D. K. McCool)	T 603
Kriz)	708	Manceau, J. M. Henderson)	436	Modeling feedlot runoff pollution – I. analog simulation	
Movement of agricultural fertilizers and organic insecticides in surface		Stress analysis of eggshell (J. R. Man- ceau, J. M. Henderson)	440	II. Quasilinearization (S. F. Kang, L. T. Fan, E. S. Lee, L. E.	T 864
runoff (Dennis M. Sievers, Gary L. Lentz, Robert P. Beasley)T	323	nomena in biological materials (part		(S. F. Kang, L. T. Fan, E. S. Lee, L. E. Erickson)	
Small particle re-entrainment from horizontal surfaces (Dennis R. Held-		I, the isotherm equation) (P. O. Ngod- dy, F. W. Bakker-Arkema)T	612	SAFETY	
horizontal surfaces (Dennis R. Held- man, J. S. Punjrath)	387	Analysis of stress during impact of fruit considered to be viscoelastic		Verification of a mathematical model	
water users (James P. Law, Jr., Harold Bernard)T	474	(Donald D. Hamann)T	893	to predict tractor tipping behavior (J. A. Koch, W. F. Buchele, S. J. Marley) .1	F 67
Modeling feedlot runoff pollution — I. analog simulationT		PROJECTIONS (NEXT 50 YEARS) Social responsibilities of agricultural		Small tractor operator position and safety behavior (L. W. Knapp, Jr., J. T.	
II. quasilinearization	864	engineers during next 50 years	193	Parks)	456
Erickson)		Electromation in agriculture during next 50 years	223	SALINITY (SALT) Drip irrigation – a method used under	
POTATO MECHANIZATION, HANDLING,		Trends in engineering education dur- ing next 50 years	223	arid and desert conditions of high wa- ter and soil salinity (D. Goldberg, M.	
STORAGE Centralized potato storage – a consult-		Soil and water developments of next half century	224	Shmueli)	38
ing engineer's approach (Walter F. Car- penter)	24	Agricultural equipment a half century from now	224	SEA FARMING	
Mechanical separation of stones from		Trends in agricultural engineering cur- ricula	230	The National Sea Grant Program (Robert D. Wildman)	410
potatoes with rotary brushes (F. E. Eaton, R. W. Hansen)T	591	Food engineering - from which to	230	SEATS	
POULTRY, POULTRY HOUSING AND		build future	244	An active seat suspension system for off-road vehicles (L. F. Stikeleather,	
EQUIPMENT Drying poultry manure inside the poul-		next 50 years	244	C. W Suggs)	99
Effect of acclimation on partitioning	136	future implications in agricultural en-		safety behavior (L. W. Knapp, Jr., J. T.	AEC
of heat loss by the laying hen (J. A. DeShazer, K. A. Jordan, C. W. Suggs) . T	82	gineering Career opportunities in year 2020	246 246	Parks) Application of a dynamic simulator in	456
Designing poultry house ventilation systems (Floyd N. Reece, C. W. Bou-		Research trends during next 50 years. The future of forest engineering	248 279	seat testing (Charles W. Suggs, Larry F. Stikeleather, John Y. Harrison, Roy	
chillon, J. W. Deaton)	523	Product safety in 2020	279	E. Young)	378
el chamber (S. A. Weller, D. R. Held-	207	RADIATION		sion for off-road vehicles (C. W. Suggs, L. F. Stikeleather, C. F. Abrams, Jr.) . T	608
man, M. L. Esmay)T Measurement of hypothalamic temper-		A bridge method for dielectric measurements of grain and seed in the 50-			000
ature and heart rate of poultry (Norman R. Scott, Arthur T. Johnson, A. van Tienhoven)		to 250-MHz range (J. L. Jorgensen, A. R. Edison, S. O. Nelson, L. E. Stetson) . T	18	SOIL COMPACTION Relation of moisture content to failure	
Physical properties of eggshell (J. R.		Effects of 100F and 115F blackbody ra- diation on flight activity of stable flies		strengths of seven agricultural soils (W. J. Chancellor, J. A. Vomocil)T	9
Manceau, J. M. Henderson)T Stress analysis of eggshell (J. R. Man-	436	(I. L. Berry, O. R. Kunze)T Determining dielectric properties of	328	An electronic hand-operated recording penetrometer (Osburn C. Prather.	
ceau, J. M. Henderson)T Evaluation of equipment performance	440	grain and seed in the audiofrequency range (Paul T. Corcoran, Stuart O. Nel-		penetrometer (Osburn C. Prather, James G. Hendrick, Robert L. Schafer) T	385
in controlled environment broiler		son, Leverne E. Stetson, Carl W. Sch- laphoff)T	348	SOIL DYNAMICS AND MECHANICS	
chambers (Mylo A. Hellickson, Alfred D. Longhouse, R. A. Peterson)T Factors affecting design criteria for	622	Fluidized bed electron beam processing (B. W. Wilkinson)		Similitude studies of soil machine sys- tems (Dean R. Freitag, Robert L. Scha-	
ventilation of windowless broiler houses (Floyd N. Reece, J. W. Deaton) T	636	A method for determining dielectric	403	fer, Robert D. Wismer)T Tillage-tool interaction with a bound-	201
Mathematical modeling of thermal	030	properties of grain and seed in the 200- to 500-MHz range (LaVerne E. Stet-	101	ed, artificial soil (K. James Fornstrom, Ross D. Brazee, William H. Johnson) .T	409
homeostasis in a chicken (Charles W. Bouchillon, Floyd N. Reece, J. W. Deaton)		son, Stuart O. Nelson)T An analytical and experimental study	491	Determination of oil content of artificial soils (William R. Gill)T	
Temperature preferences of chicks	648	of radiant heating of rice grain (Satish Bal, Finis T. Wratten, Jerry L.		A similitude study with static and dy- namic parameters in an artificial soil	
Temperature preferences of chicks (D. O. Baxter, Thomas E. Maddox, Herschel V. Shirley)T	788	Chesness, Macon D. Faulkner)T Use of gamma ray transmission in se-		(L. W. Sprinkle, T. D. Langston, J. A. Weber, N. M. Sharov)	E90
POWER TRANSMISSION		lecting lettuce for harvest (Roger E. Garrett, Wilson K. Talley)T	820	Stress-strain characteristics of a satu-	300
Fluidic control of hydrostatic tractor		RAINFALL		rated clay soil at various rates of strain (Awatif M. El-Domiaty, William	
transmissions (F. W. Howard, Stanley J. Clark, R. O. Turnquist)	72	Hurricane Camille: a furious monitor to builders and rebuilders (E. George		J. Chancellor)T Discussion of stress-strain character-	685
Developing power transmission fluids for agriculture (R. R. McCoy, A. G.	240	Stern)	75	istics of a saturated clay soil at vari- ous rates of strain (Yu-Tang Chou)T	690
	348	RESEARCH World research needs for increasing		Air-steam treatment of horticultural soil mixes in greenhouse benches (R.	
PROCESSING Small particle re-entrainment from		corn production (G. F. Sprague)	71	A. Aldrich, W. H. Berning) T The analysis of soil surface roughness	691
horizontal surfaces (Dennis R. Held- man, J. S. Punjrath)	387	Agricultural engineering research: im- pact on people and agriculture (T. W.		(H. David Currence, Walter G. Lovely) .T	710
Fluidized bed electron beam processing (B. W. Wilkinson)		Edminster)	201	SOIL EROSION	
Approximate solution for rate of sub- limation-dehydration of foods (S. H.	100	year 2000 (Walter M. Carleton) An analysis of animal environmental	205	Erosion control in New Brunswick (Canada) (P. Jacobson, E. A. Olafson,	
Cho, J. E. Sunderland)T Heat transfer in nucleate boiling of	559	research needs (Robert E. Stewart)	403	J. A. Roberts)T	459
sorghum syrup (C. A. Flood, Jr., Gerald	504	RICE Asian tropical rice land preparation:		SPRAYERS AND SPRAYING Use of the stain method in determin-	
M. White)T Holding-time measurement in an ul-	394	defining the problem (Loyd Johnson, David A. Link)	286	ing the drop-size distributions of coarse liquid sprays (M. J. Hall)T	. 22
trahigh-temperature, direct-steam-in- jection system (E. R. Edgerton, Victor_		Mechanizing the tropical farm (Amir	640	Pesticide drift from aerial and ground applications (K. R. Frost, G. W. Ware)	
A. Jones)T Physical properties of ponfat dry milk	695	An analytical and experimental study	040	High-speed photography as a tool for	460
as influenced by spray drying condi- tions (Hiromichi Hayashi, Dennis R.		of radiant heating of rice grain (Satish Bal, Finis T. Wratten, Jerry L. Ches- ness, Macon D. Faulkner)T	CAL	spray-droplet analysis (A. A. Amberg, B. J. Butler)T	541
Heldman, T. I. Hedrick)T	723	Laboratory testing of rice combines		Analog simulation of in-flight evapo- ration of spray droplets (M. Ray	
PRODUCT PROPERTIES		(Allan E. Neal, Geoffrey F. Cooper)T	824	Smith)T	587
Alfalfa protein concentrates for human and animal consumption (Mark A.	410	RUNOFF V-notch weir for submerged flow meas-		Design of a spinning disc, droplet separator and the determination of the size and density of droplets de-	
Dielectric constant of wheat straw (R.	412	urement (Paul Yates)	132	posited on cotton foliage (David B.	
S. Ko, G. C. Zoerb)T Corn kernel crackage induced by me-	42	agricultural watersheds (V. T. Ricca.		Smith, Eddie C. Burt, F. J. Benci)T Spray drop size control (Lawrence O.	
chanical shelling (Glenn E. Hall, William H. Johnson)	51	P. W. Simmons, J. L. McGuinness, E. Paul Taiganides)T Movement of agricultural fertilizers	187	Roth, Jay G. Porterfield)T	779
Investigation of some aerodynamic properties of lowbush blueberries (Hayden M. Soule, Ir.)		and organic insecticides in surface		STANDARDS The need for uniform standards for	
(Hayden M Soule Ir)	114	runoff (Dennis M. Sievers, Gary L.	323	forest equipment (Norris C. Olsen)	706

STEERING Developing an automatic steering sys-	Field-curing burley tobacco under	WASTE DISPOSAL Drying poultry manure inside the poul-
tem for a hydrostatic vehicle (R. L. Parish, C. E. Goering)	plastic (Elmon E. Yoder)	try house (Glenn O Bressler) 13 Agricultural wastes and the environ-
An automatic guidance system for farm tractors (M. A. Grovum, G. C.	Jr.)	ment (E. Paul Taiganides) 35
Zoerb) 5	5 TRACTORS	The future of farm animal waste man- agement (James A. Moore, Donald B.
Effects of articulated steering on trac- tive performance of a rubber-tired log-	Developing the JD540 (J. W. Jewett, A. S. Smemo)	Brooker)
ging tractor (Roone Y Richardson	Verification of a mathematical model	(W. E. Burnett, N. C. Dondero) 22
Arthur W. Cooper)T 6 Effect of tractor parameters on auto-	to predict tractor tipping behavior (J. A. Koch, W. F. Buchele, S. J. Marley) .T 67	The case of the misguided number or "you don't say" (Conrad B, Gilbertson) 51
matic steering (Lal N. Shukla, Carroll E. Goering, C. LeRoy Day)	Effect of cab, soundproofing, and ex- haust-control methods on tractor noise	Anaerobic decomposition of swine ex- crement (O. E. Cross, Alvaro Duran) T 32
STONES	at operator's site (D. W. Ryland, P. K. Turnquist)T 148	Use of soil to treat anaerobic lagoon
Mechanical separation of stones from potatoes with rotary brushes (F. E. Ea-	Small tractor operator position and safety behavior (L. W. Knapp, Jr., J.	effluent renovation as a function of depth and application rate (J. K. Koel-
ton, R. W. Hansen) T 5	safety behavior (L. W. Knapp, Jr., J. T. Parks)	liker, J. R. Miner)T 49 Use of soil to treat anaerobic lagoon
SUGAR CANE MECHANIZATION	50 years of Nebraska test highlights 515 Optimizing control systems for elec-	effluent: design and operation of a field disposal system (Dale H. Vanderholm, Craig E. Beer)
A harvest aid for sugar cane (David J. van Rest)	trified vehicles (Walter Slabiak) 694	derholm, Craig E. Beer)T 56
SWEET POTATOES	Application of a dynamic simulator in seat testing (Charles W. Suggs, Larry	
The design of sweet potato machinery (James R. Hammerle)	seat testing (Charles W. Suggs, Larry F. Stikeleather, John Y. Harrison, Roy E. Young)	runoff losses (R. F. Hensler, R. J. Ol-
	Vehicle-design concept to fully utilize	on crop yields, nutrient recovery and runoff losses (R. F. Hensler, R. J. Olsen, S. A. Witzel, O. J. Attoe, W. H. Paulson, R. F. Johannes)
SYSTEMS Applications of systems techniques to	the potential of hydrostatic drives (W. E. Larsen, D. R. Hunt, R. R. Yoerger) .T 482	WATER
design and planning - agricultural systems engineering introduction	tem for a hydrostatic vehicle (R. I.	Agricultural chemicals and our water resources (Edwin J. Monke) 35
(Robert M. Peart) 8 Survey of simulation techniques and	An automatic quidance evetem for	Water quality – a concern for agricul- tural engineers (Paul F. Schleusener) . 35
applications to agricultural problems (David A Link William F Splinter) T 8	farm tractors (M. A. Grovum, G. C.	tural engineers (Paul E. Schleusener). 35 Pushbutton control for water systems management (L. D. Wilder, Charles D.
Simulation for optimal grain-dryer design (Thomas L. Thompson) T 8 Network analysis in agricultural sys-	Zoerb)	Busch) 40
Network analysis in agricultural sys-	sion for off-road vehicles (C. W. Suggs, L. F. Stikeleather, C. F. Abrams, Jr.) T 608	The National Sea Grant Program (Robert D. Wildman)
tems engineering (Robert M. Peart, Kenneth Von Bargen, Douglas L. Dea-	L. F. Stikeleather, C. F. Abrams, Jr.) T 608 Effects of articulated steering on trac-	Electric potentials and domestic water supplies (Lloyd B. Craine, Melvin H. Ehlers, D. K. Nelson)
son)		H. Ehlers, D. K. Nelson)
mathematical programming (J. B. Holt- man)	Arthur W. Cooper) T 633 Effect of tractor parameters on auto-	Simulating flood routing through a reservoir (M. Y. Hamby, R. B. Curry) . 65
	matic steering (Lal N. Shukla, Carroll E. Goering, C. LeRoy Day)	Protective spray coatings for water harvesting catchments (Gary W. Fras-
THERMAL AGRICULTURE Effects of thermal exposure on the	The effects of LP-gas injection on a farm-tractor diesel engine (Leland Wol-	ier, Lloyd E Myers)T 29 Water quality survey (T. L. Coulthard,
Effects of thermal exposure on the foliage of young corn and soybean plants (William F. Lalor, Wesley F. Bu-	ken, J. A. Weber) 1 /18	J. R. Stein) T 43 Impact of agricultural pollutants on
Thermal defoliator developments (Da.	additives (N. S. VIFK, J. A. Weber) 1 /58	water users (James P. Law, Jr., Harold
vid G. Batchelder, Jay G. Porterfield, Warren E. Taylor, Glen F. Moore) T 7 Effects of thermal energy treatments	VENTILATION	Bernard) T 47
Effects of thermal energy treatments	Wall-jet velocity and temperature pro-	WATER TABLE Effect of water-table levels on evapo-
on the alfalfa weevil (Wesley L. Harris, J. M. Marchello, R. M. Coan) 7	files resulting from a ventilation inlet (J. D. Wilson, M. L. Esmay, S. Persson) T 77	transpiration and crop yield (R. E. Williamson, John R. Carreker) 16
TILLAGE AND TILLAGE MACHINERY	Designing poultry house ventilation systems (Floyd N. Reece, C. W. Bou-	Response of agricultural crops to flooding, depth-of water table and soil
No-tillage corn - characteristics of the	chillon, J. W. Deaton)	gaseous composition (R. E. William-
No-tillage corn – characteristics of the system (Lloyd L Harrold, G. B. Triplett, Jr., W. M. Edwards)	dairy cattle based on expected produc-	son, George J. Kriz)
tems (Dean R. Freitag, Robert L. Scha- fer, Robert D. Wismer)	tion losses (LeRoy Hahn, D. D. Os- burn)	recharge (William G. Matlock)T 78
Tillage-tool interaction with a bound-	el chamber (S. A. Weller, D. R. Held-	WATERSHED Watershed development for people
ed, artificial soil (K. James Fornstrom, Ross D. Brazee, William H. Johnson) .T 4	man, M. L. Esmay) 1 30/	(Byron H. Nolte) 37
Estimating good working days available for tillage in central Missouri (James C. Frisby) The analysis of soil surface roughness (H. David Currence, Walter G. Lovely). T. 7.	systems (Charles N. Hinkle, Larry D.	Theoretical considerations of water- shed surface description (G. E. Merva,
(James C. Frisby)T 6	Good)	R. D. Brazee, G. O. Schwab, R. B. Curry)
(H. David Currence, Walter G. Lovely) .T 7	converging ducts (Gerald F. Arkin, Paul D. Rodgers)	WEED CONTROL
Response of tillage systems as influ- enced by soil type (Glover B. Triplett,		Chloride tracer evaluation of herbicide incorporation tools (Edwin J. Mat-
enced by soil type (Glover B. Triplett, Jr., David M. Van Doren, Jr., William H. Johnson)	houses (Floyd N. Reece, J. W. Deaton) T 636 Plane nonisothermal air jets discharg-	thews) T 6
TOBACCO	ing along a smooth ceiling (Terence C. Black, John N. Walker, Gerald M.	How uniform mixing of trifluralin affects weed control (W. K. Whitehead, T. H. Garner, B. K. Webb)
Respiration heat liberated by burley	C. Black, John N. Walker, Gerald M. White)	T. H. Garner, B. K. Webb) 47 Effects of thermal exposure on the fol-
tobacco during the cure (H. R. Sum- ner, E. M. Smith)		iage of young corn and soybean plants
Electrophysiologically investigating the optic tract of the tobacco hornworm	Developing a roll wafering machine:	(William F. Lalor, Wesley F. Buchele) .T 53 Thermal defoliator developments (Da-
optic tract of the tobacco hornworm moth (John S. Smith, Jr., James M. Stanley, Unus F. Earp, S. D. Carlson) .T 2.	a progress report (Richard W. Bush- meyer, David E. Krause, Carl J. Rath) . 405	vid G. Batchelder, Jay G. Porterfield, Warren E. Taylor, Glen F. Moore) T 78

